

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.

1. AGENCY USE ONLY (Leave blank)		2. REPORT DATE 1990	3. REPORT TYPE AND DATES COVERED	
4. TITLE AND SUBTITLE Abstracts fo Master of Military Art and Science (MMAS) Theses and Special Studies 1989-1990.			5. FUNDING NUMBERS	
6. AUTHOR(S) USACGSC, Office of the Director, Graduate Degree Program, 1 Reynolds Ave, Bldg 111, Fort Leavenworth, KS 66027-1352				
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) United States Army Command & General Staff College Graduate Degree Program 1 Reynolds Ave, Bldg 111 Fort Leavenworth, KS 66027-1352			8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES) UNITED STATES ARMY COMMAND AND GENERAL STAFF COLLEGE Graduate Degree Program 1 Reynolds Ave, Bldg 111 Fort Leavenworth, KS 66027-1352			10. SPONSORING / MONITORING AGENCY REPORT NUMBER SELECTED MAY 25 1995 G	
11. SUPPLEMENTARY NOTES				
12a. DISTRIBUTION / AVAILABILITY STATEMENT Approved for public release; distribution is unlimited			12b. DISTRIBUTION CODE	
13. ABSTRACT (Maximum 200 words) This volume brings together all abstracts of Master of Military Art and Science (MMAS) theses completed at USACGSC during the academic term of 1989-1990. 19950523 049 DTIC QUALITY INSPECTED 6				
14. SUBJECT TERMS			15. NUMBER OF PAGES	
			16. PRICE CODE	
17. SECURITY CLASSIFICATION OF REPORT Unclassified	18. SECURITY CLASSIFICATION OF THIS PAGE Unclassified	19. SECURITY CLASSIFICATION OF ABSTRACT Unclassified	20. LIMITATION OF ABSTRACT Unclassified	

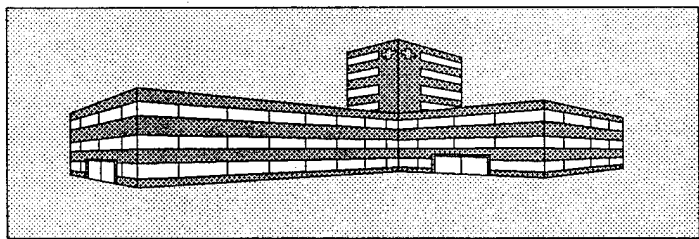
U.S. ARMY COMMAND AND GENERAL STAFF COLLEGE
FORT LEAVENWORTH, KANSAS

ABSTRACTS OF MASTER OF MILITARY ART
AND SCIENCE (MMAS)
THESES AND SPECIAL STUDIES

ANNUAL EDITION
1989-1990

U.S. ARMY COMMAND AND GENERAL STAFF COLLEGE
FORT LEAVENWORTH, KANSAS

ABSTRACTS OF MASTER OF MILITARY ART
AND SCIENCE (MMAS)
THESES AND SPECIAL STUDIES



Accession For	
NTIS CRA&I	<input checked="" type="checkbox"/>
DTIC TAB	<input type="checkbox"/>
Unannounced	<input type="checkbox"/>
Justification	
By	
Distribution /	
Availability Codes	
Dist	Avail and/or Special
A-1	

1989-1990
ANNUAL EDITION

THE DEGREE
MASTER OF MILITARY ART AND SCIENCE

On 5 August 1974 legislation was enacted authorizing the U.S. Army Command and General Staff College (CGSC) to award the degree, Master of Military Art and Science (MMAS), an authority originally requested in 1964. The legislation prescribes that the MMAS program require a thesis; also, that the College must attain affiliate or member status with the North Central Association of Colleges and Schools prior to the award of any degree. Included in the statute was authority for retroactive awards to the 182 officers who had successfully completed the MMAS requirements in previous years. On 31 March 1976 the College was granted full accreditation as a masters' degree-granting institution by the North Central Association of Colleges and Schools.

The establishment of a formal degree-granting program with the full approval of the civilian higher education community represents signal recognition for the quality of military education in general and for CGSC in particular. The degree implicitly testifies that the military profession has its own scholastic discipline, Military Art and Science; and, that insofar as the Army-in-the-field is concerned, CGSC is the source of this discipline. For those receiving degrees, the award constitutes a badge of military scholarship and is a deserving recognition for successful completion of a rigorous program. The College is proud to be the only institution to award this graduate professional degree.

FOR THE COMMANDANT:

Philip J. Brookes

PHILIP J. BROOKES
Director
Graduate Degree Program

TABLE OF CONTENTS
1989-1990

	PAGE
How to Use This Book	ii
List of Unclassified Subjects 1990	1
Theses by Year - 1990	5
Thesis Abstracts	9
Author List	45

HOW TO USE THIS BOOK

This edition brings together all abstracts of Master of Military Art and Science (MMAS) theses completed at the U.S. Army Command and General Staff College (CGSC) from 1989-1990. The subject section is designed to fit the areas of research emphasized by the MMAS student. Because of the primary military thrust of the subject matter, headings such as "U.S. Army," "War," or "Combat" have been omitted in favor of more precise captions.

Some titles have been listed in several places in the subject section, as appropriate. The numbers following the subject heading correspond to the titles in the list of theses, by year of completion. Abstracts and the number of pages in the theses are found in the body of the volume.

Copies of theses written after 1975 have been placed on file in the Defense Technical Information Center (DTIC) and are available for public use. DTIC accession numbers for these theses have been included. Copies can be requested from the following address:

Headquarters
U.S. Army Training and Doctrine Command
ATTN: ATCS-D
Fort Monroe, Virginia 23651

Additionally, copies of every thesis are on file in the CGSC Library and may be obtained through interlibrary channels. Copies may be reproduced by the borrowing agency.

Interlibrary Loan
USACGSC Library - Bell Hall
Fort Leavenworth, Kansas 66027-6900

The opinions and conclusions expressed in the enclosed abstracts are those of the authors and do not necessarily represent the views of the U.S. Army Command and General Staff College or any other Government agency.

An author list is in the back of the volume.

LIST OF SUBJECT TERMS

A-7, 801
 A-10, 801
 A-16, 801
 ACE, 783
 AFAS-C, 820
 Agents, 781
 Aggressors, 789
 Aerial Combat, 823
 Aerial Dogfight, 823
 Air Assault, 777
 Air Base Ground Defense, 806
 Air Battlefields, 827
 Air Combat, 823
 Air Defense, 819, 837
 Air Space Control, 838
 Air War, 823
 Airborne Modernization, 800
 Airborne Operations, 788
 Aircraft Requirements, 801
 Aircraft Survivability, 801
 AirLand Battle Doctrine, 816, 820, 834, 839
 Airmobile, 777
 All Source Analysis System, 827
 American Civil War, 780
 American Revolution, 776
 Andean Ridge, 791
 Antietam, 802
 Arab-Israeli War, 831
 Area of Operation, 793
 Armed Escort, 819
 Armor, 787
 Armor Doctrine, 787
 Army Conditions, 825
 Army Intelligence, 807
 Army Space Exploitation, 804
 Army Space History, 804
 Army Space Policy, 804
 Arnhem, 788
 ARTEP, 831
 Artificial Intelligence, 824
 Asean, 811
 Assessment, 773
 Attrition Theory, 797
 Attrition Warfare, 770
 Auftragstaktik, 770, 796
 Automated Command and Control, 824
 Aviation, 817
 Aviation Brigade, 784
 Bailey, 783
 Base Defense Operations, 806
 Base Operations, 779
 Battalion Command, 816, 837
 Battery Commander, 820
 Battlefield Air Interdiction, 797
 Battlefield Operating System, 816
 Battle Focus, 773
 Battle of Chickamauga, 780
 BCTP, 831
 Behavioral Science, 835
 Bilateral Cooperation, 814
 BFV, 787
 Bradley, 787
 Breakdown Maintenance, 779
 Brigade, 772
 British Army, 809
 BSM, 838
 Buffalo Soldiers, 815
 CAMPS, 781
 CAPSTONE, 773
 CAS, 801
 CBU-89, 818
 CBU-89/B, 818
 Censorship, 771
 Civil War, 796, 802, 829
 Civil War Cavalry Doctrine, 780
 Class A Agents, 781
 Close Air Support, 797, 801
 Close Support, 784
 Coca, 783
 Cocaine, 783, 791
 Combat Information, 808
 Combat Leadership, 816
 Combat Orders, 772, 822
 Combat Potentials, 836
 Combat Training Centers, 773, 822
 Combattant Commanders, 778, 806
 Combined Operations, 799
 Command, 839
 Command and Control, 770, 772, 796, 806, 822, 837, 838
 Command and Control of Fire Support, 777
 Command Estimate, 824
 Commander's Intent, 770
 Commerce Raiding, 776
 Concept Based Requirement System, 819
 Confederate Cavalry, 780
 Continental Navy, 776
 Contingency Operations, 778
 Contras, 813
 Control Measures, 822
 Conventional War, 774
 Corduroy, 783
 Corps, 837
 Corps Rear Area, 808
 Corps Rear Area Operations Centers, 808
 Correlation of Forces and Means, 836
 Cost Sharing, 779
 Counterinsurgency, 778, 810
 Counternarcotics Effort, 783, 791
 Cross FLOT, 777, 784
 Cross Training Engineers, 793
 Cubbage, 831

Currency Exchange, 781
 CV, 775
 CVE, 775
 CVN, 775
 CVV, 775
 Decision Making, 770
 Deep Operations, 784
 Demonstration, 831
 Department of Defense Public
 Information, 826
 Direct Fire, 822
 Directed Energy, 805
 Disinformation, 831
 Diversion, 831
 Doctrine, 782, 784, 831
 Domestic, 807
 Drones, 790
 Drug Enforcement, 791
 Drug Interdiction, 791
 Drug War, 807
 Electronic Warfare, 838
 Enemy Planning, 793
 Enemy Template, 793
 Engineering, 783
 Eradication, 781
 Evaluation, 773
 Evolution of Army Aviation, 784
 EW, 838
 Exercise, 814
 Expanded Roles, 785
 Family of Scatterable Mines, 818
 Family of Vehicles, 818
 FASCAM, 818
 Field Artillery, 820
 Fighting Vehicle, 787
 Finance Dispersing Sections, 781
 Finance Operations, 781
 Fire Support, 777, 784, 820
 Fire Support Coordinator, 820
 Flexibility, 801
 FOFA, 782
 Force Modernization, 800
 Forced Entry, 800
 Foreign Internal Defense, 778
 Fortification, 802
 Forward Area Air Defense System, 827
 Fratricide, 822
 French Resistance, 828
 Frequency Management, 838
 FSCoord, 820
 Future Decisions, 773
 Future Soviet, 803
 Future Threats, 800
 Gator Mines, 818
 Gazelle, 789
 Geneva Convention, 833
 Grierson, Benjamin Colonel, 815
 Guerrilla Warfare, 778
 Harrier, 775
 Harrier II, 775
 Havoc, 779
 Helicopter, 789

Health Service Support, 829
 Hermit, 789
 High-Low Concept, 775
 Hind, 789
 History of Tenth Cavalry Regiment,
 815
 H-Hour Sequence, 777
 Hokum, 789
 Hospitals, 827
 Host Nation Support, 806
 Impact on Afghanistan, 803
 Infantry, 778, 787
 Infantry Fighting Vehicle, 787
 Information, 785
 Information Requirements, 771
 Infrastructure, 779
 Institutional Professionalism, 825
 Insurgency, 774
 Intelligence, 808, 839
 Intelligence Preparation of the
 Battlefield, 827, 839
 Intent, 822
 Interdiction, 782
 International Small Aircraft
 Carriers, 775
 Japanese Defense Issues, 814
 Jedburgh, 788, 828
 JGSDF, 814
 Joint Air Attack Team, 784
 Joint Air Combat Attack, 827
 Joint Strategic Capabilities Plan,
 778
 Joint Suppression of Enemy Air
 Defense, 784
 Journalism, 771
 JUMPS, 781
 Laser, 805
 Latin America, 778
 Leadership, 799, 816
 Level Organized, 773
 Life Cycle, 779
 Light Forces, 800
 Light Infantry, 778
 Light Infantry Division, 778
 Low Intensity Conflict, 778
 Makin, 799
 Management, 785
 Maneuver Warfare, 770
 Maneuver Theory, 797
 Market Garden, 788
 Mass Communication, 771
 Mathematical Models, 836
 Medical, 805, 829
 Militant Mass Movement, 786
 Military and the Media, 771
 Military Decision Making, 836
 Military Facilities, 779
 Military History, 771
 Mission Orders, 796
 Mobilization, 799
 Narcotics, 807
 Nation Building, 783

National Democratic Front, 786
 National Guard, 773, 799
 National Training Center, 830
 NATO, 795
 Needs Assessment, 779
 Nicaragua, 813
 NTC, 789
 Norwegian Defense, 795
 Norwegian Security, 795
 NNWFZ, 795
 Nuclear Development, 812
 Office of Strategic Services (OSS), 788
 Officer Opinions, 796
 Officer Training, 809
 Okinawa, 797
 Operational Level of War, 797
 Operations Orders, 770, 796
 Organizational Behavior, 835
 Organizational Effectiveness, 835
 Pacification, 810
 Pakistan & Iran, 803
 Pay, 781
 Perestroika, 803
 Philippines, 811
 Pilot Retention, 792
 Plant Replacement Value, 779
 Political and Organizational Struggle, 786
 Political Leadership, 821
 Premobilization Planning, 799
 Preventive Maintenance, 799
 Prisoner Death Rate, 794
 Prisoner of War Camps, 794
 Prisoners of War, 833
 Privateering, 776
 Privateers, 776
 Procurement, 785
 Professionalism Socialization, 825
 Provost Marshal General, 833
 Psychology, 835
 Public Affairs, 771
 Public Opinion, 814
 Public Works, 779
 Purchase of Commission, 809
 Rated Retention, 792
 Real Property, 779
 Rear Area Security, 806
 Rear Operations, 772
 Rehearsals, 822
 Remotely Piloted Vehicles, 790
 Revitalization, 779
 Revolutionary Warfare, 778
 Rifle, 802
 RMAS, 809
 RPV, 790
 Rule-Based Expert Systems, 824
 Saipan, 799
 Sandhurst, 809
 Sandinista, 813
 Sea-Control Ships, 775
 Self-Defense Force, 814
 Scandanavian Security, 795
 SCS, 775
 Skirmish Line, 802
 Small Aircraft Carriers, 775
 Small Unit Leadership, 816
 Snipers, 832
 Sniper Weapons, 832
 Social Sciences, 835
 South Vietnam, 810
 Soviet Airborne, 800
 Soviet Army, 834
 Soviet Military Art, 836
 Soviet Military Power, 826
 Soviet Models, 836
 Soviet Policy in S.W. Asia, 803
 Soviet Security Issues, 795
 Soviet Troop Control, 770
 Soviet/U.S. Military Force Comparison, 826
 Soviet Union & Afghanistan, 803
 Soviet Withdrawl from Afganistan, 803
 Space Law, 804
 Space Systems Potential, 804
 Special Air Operations, 819
 Special Operations Executive (SOE), 788, 828
 Special Operations Forces (SOF), 788, 789
 Spectrum Management, 838
 Spotsylvania, 802
 Staff Activities, 772
 Staff College, 809
 Staff Duties, 809
 Staff Planning, 770, 822
 Stalingrad, 797
 Strategic Hamlet Program, 810
 Super Power, 812
 Super Power and Major Power Interests, 811
 Supporting Fire, 787
 Surveillance, 806
 Survey, 796
 Svalbard Islands, 795
 Synchronization, 770, 777, 830, 837, 839
 Systems Cannon, 820
 Tactical Air Power, 797
 Tactical Combat Force, 806
 Tactical Intelligence, 790
 Tactical Mission Dispenser, 818
 Tactics, 832
 Take Home Package, 830
 Tank Design, 817
 Tank History, 817
 Task Force, 830
 Third World Threats, 800
 Threat, 811
 Threat Attack Helicopters, 789
 Threat Levels, 806
 Training, 799, 814, 822
 Training Strategy, 773

Troop Leading Procedures, 770, 796
Turrettless Tank, 817
UAV, 790
Union Prison Camp, 794
United Front, 786
Unmanned Aerial Vehicles, 790
U.S. Air Force Retention, 792
Initiatives, 792
U.S. Army, 774
U.S. History, 771
U.S./Soviet Logistics, 834
Viet Cong, 810
Vietnam War, 774
VISTOL, 775
War Correspondence,
War on Drugs, 807
Warning Orders, 770
Wartime Pay Support, 781
Wellington, 809
Wilderness, 802

MASTER OF MILITARY ART AND SCIENCE THESES
1989-1990

770.	Combat Orders: An Analysis of the Tactical Orders Process (ADA 227 390)	9
771.	Wartime Press Censorship by the U.S. Armed Forces: A Historical Perspective (ADA 227 383).....	9
772.	Brigade Rear Operations - Who's in Charge? (ADB 148 327).....	9
773.	Train As You Will Fight: Factors Affecting Development of a Strategy to Train National Guard Units to the Level Organized (ADA 228 404).....	10
774.	The Army and the Strategic Military Legacy of Vietnam (ADA 227 466)	10
775.	The Small Aircraft Carrier: A Re-evaluation of the Sea Control Ship (ADA 227 420).....	11
776.	Rebel Privateers - The Winners of American Independence (ADA 227 573)	11
777.	Fire Support Techniques in Support of Cross FLOT Air Assault and Airmobile Operations: Are We Doing it Right? (ADB 148 424L)...	11
778.	The Light Infantry Division Regionally Focused for Low Intensity Conflict (ADB 150 050).....	12
779.	Military Infrastructure: Is it as Bad as the Nation's Infrastructure? (ADA 228 999).....	12
780.	Confederate Cavalry at Chickamauga - What Went Wrong? (ADA 228 998)	12
781.	An Analysis of Finance Operations from World War II to the Vietnam Conflict -- Was any Progress Made? (ADA 228 006).....	13
782.	Operational Interdiction, An Appraisal of United States Interdiction Doctrine for the Operational Level of War (ADA 227 382).....	13
783.	Can U.S. Army Engineer Units Assist Host Nation Coca Eradication Efforts in the Andean-Amazon (ADB 149 107L).....	13
784.	Fire Support for the Aviation Brigade (Heavy Division): A Doctrinal Analysis (ADB 148 359L).....	14
785.	A Centralized Source of Information for the Military Working Dog Program (ADA 229 000).....	14
786.	The Communist Party of Philippines Theory and Practice of United Front (ADA 227 344).....	14
787.	The Role of the Fighting Vehicle on the AirLand Battle (ADA 227 430)	15
788.	The Role of Jedburgh Teams in Operation Market Garden (ADB 149 933L)	15

789.	Army Rotary-Wing Aggressors: The Key to Counter Helicopter Training (ADB 148 401L).....	16
790.	Army Unmanned Aerial Vehicle (UAV) Requirements and the Joint UAV Program (ADA 228 149).....	16
791.	The Role of Special Operations Forces in Counter-Narcotic Operations (ADA 227 351).....	17
792.	UAAF Pilot Retention: An Analysis of Air Force Initiatives to Improve Pilot Retention (ADB 148 371L).....	17
793.	Tactical Breach Operations in Modern Warfare (ADA 242 705).....	17
794.	Camp Chase, Ohio 1861-19656: A Study of the Union's Treatment of Confederate Prisoners of War (ADA 228 997).....	18
795.	The Impact of the Soviet Military Presence in the Arctic Region on Norwegian Security Policies (ADA 227 428).....	18
796.	Mission Orders in the United States Army: Is the Doctrine Effective? (ADA 242 667).....	18
797.	Tactical Airpower at the Operational Level (ADA 229 001).....	18
798.	Operational Raids: Cavalry in the Vicksburg Campaign, 1862-1863 (ADA 227 562).....	19
799.	The National Guard in War: An Historical Analysis of the 27th Division (New York National Guard) in World War II (ADA 227 332)...	19
800.	United States Army Power Projection in the 21st Century: The Conventional Airborne Forces Must be Modernized to Meet the Army's Strategic Force Requirements and the Nation's Future Threats (ADA 226 216)	20
801.	The Interim Close Air Support Aircraft - Is the A-10+, A-7+, or the A-16 the Most Suitable for the High Threat Environment (ADB 148 355)	20
802.	Wall of Fire -- The Rifle and Civil War Infantry Tactics (ADA 227 467)	20
803.	Soviet Interests in Afghanistan and Implications Upon Withdrawl (ADA 229 568)	21
804.	The Army in Space: An Assessment Today for Tomorrow (ADB 148 598).	21
805.	Medical Implications of Lasers on the Modern Battlefield (ADA 227 387)	22
806.	The 1985 U.S. Army - U.S. Air Force Joint Service Agreement for Base Defense and Its Impact on Air Base Ground Defense (ADB 150 063L)	22
807.	The Role of the Army Intelligence in the Domestic War On Drugs (ADB 149 106L).....	23
808.	"Systematic Watch" in the Corps Rear Area (ADA 227 431).....	23

809.	The Requirement for and Subsequent Development of a Training Scheme for the Officers and Staff of the British Army 1799-1858 (ADA 227 572)	23
810.	Why did the Strategic Hamlet Program Fail? (ADA 228 494).....	24
811.	Security of Association of Southeast Asian Nations (ASEAN) Member-States in 1995: Is a U.S. Military Presence Necessary? (ADA 229 567)	24
812.	Pakistan and Nuclear Weapon Proliferation: A Historical Analysis of the Pakistani Nuclear Program 1947-1990 (ADA 227 345).....	31
813.	Sandinista Counterinsurgency Tactics (ADA 229 156).....	31
814.	The Influence of Japanese Public Opinion and Government Policy on the Planning and Execution of U.S.-Japanese Bilateral Ground Exercises (ADA 227 658).....	32
815.	Buffalo Soldiers: The Formation of the Tenth Cavalry Regiment from September 1866 to August 1867 (ADA 229 157).....	32
816.	Battalion Command in Combat - Forward Edge of Combat Power (ADA 227 385)	33
817.	Is A Turretless Tank a Viable Option for the United States Army (ADA 227 389)	33
818.	CBU-89 Gator Mines in the Future AirLand Battle (ADB 150 966L).....	34
819.	Armed Escort for Special Air Operations--An Operational Concept (ADA 227 391)	34
820.	The Advanced Field Artillery System-Cannon Battery (ADB 148 380L)..	35
821.	General George C. Marshall, Emergence of a Politician, 1 September 1939 to 6 December 1941 (ADA 227 429).....	35
822.	Employment of Direct Fire Systems During Offensive Operations (ADA 227 386)	35
823.	The Aerial Dogfight: A Valid Part of Today's and Tomorrow's Air War (ADA 227 343).....	36
824.	Rule-Based Expert Systems in the Command Estimate: An Operational Perspective (ADA 227 333).....	36
825.	Army Professionalism 1877-1898: Myth or Reality (ADA 227 421).....	37
826.	The Validity of Soviet Military Power (ADA 227 470)	37
827.	Joint Air Combat in the Close Air Battlefield (ADB 148 330L).....	38
828.	The Jedburghs - Combat Operations Conducted in the Finistere Region of Brittany, France From July - September 1944 (ADB 148 370)	38
829.	A Study of the Medical Support to the Union and Confederate Armies During the Battle of Chickamauga (ADA 227 465).....	38

830.	Exploiting Experience: Developing a Method for Validating Tactical and Training Doctrine Using Data from the National Training Center (ADB 150 646L).....	39
831.	Deception Integration in the U.S. Army (ADA 230 184).....	40
832.	Special Operations Sniper Employment in Direct-Action Missions (ADB 150 645L)	40
833.	Effects of Organizational Structure on American Enemy Prisoner of War Operations (ADA 228 008).....	41
834.	Soviet and U.S. Army Operational and Tactical Logistics (ADB 148 402L)	41
835.	The Army Organizational Effectiveness Program: A Historical Perspective (ADA 233 104).....	42
836.	Soviet Correlation of Forces and Means: Quantifying Modern Operations (ADA 227 427).....	42
837.	The Role of the Corps Air Defense Artillery Brigade (ADB 148 594L)	42
838.	USA - USAF Spectrum Management for the Airland Battle (ADB 148 594L)	43
839.	Preparing for the Synchronization Process: Mechanized Battalion - Task Force Level (ADA 227 350).....	43

MASTER OF MILITARY ART AND SCIENCE THESES
1989-1990

770. Combat Orders: An Analysis of the Tactical Orders Process, by Major John F. Antal, USA, 227 pages.

This study recommends changes to the U.S. Army's tactical orders process in order to increase the Army's ability to execute AirLand Battle at the tactical level of war. The thesis examines the tactical orders process of the Wehrmacht, the Soviet Army and the U.S. Army. The tactical orders process is defined as the process by which a tactical level commander receives or deduces the mission, analyzes the tactical situation, prepares courses of action, makes a decision, issues an order, executes the plan, and adjusts to new situations in order to accomplish the mission. The methodology compared to the current U.S. procedures with those of Wehrmacht and the Soviet Army. The Wehrmacht employed a very decentralized, predominantly verbal, tactical orders process. The Soviet Army employs a very centralized, predominantly graphic, tactical orders process. Both aim at shortening tactical decision cycles and gaining a time advantage through a quick and effective orders process. Research revealed that many units in the U.S. Army do not conduct an effective tactical orders process. Current procedures are "orders intensive" and do not meet the requirements of agility and flexibility demanded by AirLand Battle doctrine. Changes to the orders process, the operations order format and a time linked criteria for orders are suggested.

771. Wartime Press Censorship by the U.S. Armed Forces: A Historical Perspective, by Captain Paul L. Aswell, USA, 251 pages.

This study is an analysis of historical factors which form the basis for past U.S. wartime press censorship by the U.S. armed forces and the significance these factors have on future U.S. military operations. These factors are: the relative success of past voluntary and involuntary censorship and press restrictions, the effects of evolving technology on censorship, and the recurring debate over censorship which preceded each of our conflicts. The analysis shows an evolution of wartime press censorship from the colonial era to the Panama intervention, Operation Just Cause, and traces in depth the following conclusions: improvement in newsgathering technology initially resulted in the perception that reporting from theaters of war must be formally restricted to protect operational security and America's tradition of press freedom and the "people's right to know" have now outweighed the need for formal protection of operational security. The study concludes that technology, Congressional reluctance to curb the news media, and the desire of the armed forces to inspire confidence and trust have combined to eliminate censorship organization and procedures from U.S. military planning, force structure, and capabilities.

772. Brigade Rear Operations - Who's in Charge?, by Major John E. Ball, USA, 133 pages.

This study is a critical analysis of current brigade rear operations doctrine with specific focus on who should control and coordinate brigade rear operations. Each brigade rear operations function is examined in detail from a doctrinal perspective. In the absence of specifically applicable doctrine, these rear operations functions are defined as: (1) movement, (2) sustainment, (3) security, (4) terrain management, and (5) control and coordination. A survey is used to determine who currently plans and coordinates these functions within the existing 28 division force structure. A decision matrix approach is used to compare the various individuals currently involved in control and coordination of brigade rear operations. These individuals are compared against a list of characteristics for the ideal brigade rear operations controller. The decision matrix is used to determine

the individual best qualified for the brigade rear operations controller function.

Among the many conclusions which could be drawn from this study are: brigade rear operations doctrine is currently evolving; specific doctrinal guidance on rear operations at the brigade level is lacking; brigades in the current force structure accomplish rear operations in different ways, although rear operation responsibilities largely fall on the same small group of individuals; and rear operations doctrine has been driven primarily based on the perceived threat to rear areas.

The study concludes that the brigade executive officer is the best individual to accomplish the control and coordination of brigade rear operations.

773. Train As You Will Fight: Factors Affecting Development of a Strategy to Train National Guard Units to the Level Organized, by Major Anthony L. Barnhill, USA, 141 pages.

This study gives a perspective on training National Guard units to the levels organized by evaluating several factors affecting the Guard's ability to do so. The problem is not new but has taken on new relevance as the U.S. military undergoes the throes of a major reorganization.

With the advent of the Total Force concept and the CAPSTONE program, the National Guard took on more important and increased responsibilities in sustaining world peace. This thesis looks at how the Army has historically trained, reviews present National Guard training opportunities, and evaluates training strategies developed to guide future Total Force training.

This study evaluates current Army training doctrine and regulatory guidance to ascertain whether clearly defined training strategies aimed at the peculiarities of the National Guard training environment exist. The study also examines documents outlining future training directions for the standing Army and the National Guard against the same criteria.

Past and future uses of the Combat Training Centers are examined to determine whether "train as you will fight" is adhered to for all components of the Total Force or whether separate training evaluation events and standards are maintained for the standing Army and the National Guard.

Throughout, this thesis asks many questions concerning the Army's acceptance and support of the National Guard as an equal member of the Total Force. It is my intent to answer those questions using existing policy, historical examples, and current guidance for developing future training programs.

774. The Army and the Strategic Military Legacy of Vietnam, by Major Michael J. Brady, USA, 321 pages.

This study analyzes how the U.S. Army assimilated the Vietnam War's strategic military legacy. The investigation looks at the body of Vietnam lessons literature. An examination of three institutional criteria attempts to discern the Army's interpretation of Vietnam's legacy. The criteria are: military journals, doctrine, and service school curricula. The investigation also employs a survey instrument to ascertain what the post-Vietnam officer generation perceives to be the war's strategic legacy. The study concludes that the Army has consciously avoided a frank, comprehensive strategic appraisal that embraces a detailed consideration of North Vietnamese strategy. The Army chose to consciously focus on its central European mission which provided the Army with a new sense of purpose and *raison d'être*. The study concludes that there is no comprehensive post war strategic assessment that

bears the Army's imprimatur. The absence of an Army postwar strategic assessment constrains the Army's ability to conceptually address future Third World conflicts which employ revolutionary warfare to achieve their ends.

775. The Small Aircraft Carrier: A Re-evaluation of the Sea Control Ship, by Lieutenant Commander John L. Canaday, USN, 101 pages.

The question of how to meet our obligations at home and abroad is necessarily answered from many viewpoints: tactical, technical, and financial. As the Navy faces serious cutbacks in its budget, the financial aspect increases in importance disproportionately over the other factors. Nevertheless, in an attempt to maximize the dollar without sacrificing efficiency, a review of alternative systems is now needed.

This study analyzes the low-end, low-technology, small aircraft carriers, called sea-control ships, as they have developed. Additionally, it considers the research currently available as well as the considered opinions of leading naval experts. Using an historical approach, the study reviews these ships as they came into existence at the beginning of this century and pays particular attention to the World War II era where they were used effectively to replace more costly ships.

The study identifies situations where sea-control ships satisfactorily function and where they do not. It discusses modern technology developments which increase its potential, as part of a mixed force with the high-end, high-technology, large-deck carriers, and the future this type of ship may face.

776. Rebel Privateers - The Winners of American Independence, by Lieutenant Commander Michael S. Casey, USN, 111 pages.

This is a quantitative analysis of rebel privateers commissioned by Congress during the American Revolution. Documented contributions, primarily from primary sources, are compared to those of the Continental Navy. Through an "average" privateer and Continental Navy vessel, the study conducts a cost analysis of these warships as well as the number and dollar value of their prizes to the American war effort. The effect of privateers on the British economy and their impact on British naval, domestic, and diplomatic policy are also examined. The study concludes that privateering was the most cost-effective naval option available to Congress. More importantly, due to the infinite demands which privateers placed on the Royal Navy, while extracting a staggering cumulative toll on British commerce, privateers met nearly all the preconditions for American victory. The study further concludes that previous works, particularly Mahan's, underestimated the relative contributions of the privateer. The quantifiable material available today indicates that privateers provided the decisive element of American rebel strategy.

777. Fire Support Techniques in Support of Cross FLOT Air Assault and Airmobile Operations: Are We Doing It Right?, by Major John G. Grary, USA.

This study is a comparison of U.S. Army (Light) forces in regards to the way they plan, control, and execute fire support for cross FLOT air assault and airmobile operations. The study uses the tenets of AirLand Battle, agility, depth, synchronization, and initiative to evaluate the procedures used within the (Light) forces. Data is gathered by researching the Standing Operation Procedures (SOPs) of the units studied and by soliciting current field experiences through the use of a survey instrument. The study concludes that Fort Sill, should be the proponent institution for all matters concerning fire support, and should incorporate into existing manuals a standard procedure for the conduct of fire support in conjunction with air assault and airmobile operations.

778. The Light Infantry Division Regionally Focused for Low Intensity Conflict, by Major Lauren Steve Davis, Jr., USA, 313 pages.

This study examines the utility of regionally focusing a light infantry division to maximize its effectiveness for low intensity conflict (LIC). The light infantry divisions (LID) are the US Army's most strategically deployable divisions and train for contingencies worldwide. This study first explores why the light infantry division currently exists within the US force structure and its relationship to the spectrum of conflict, especially low intensity conflict. This study concludes that the light infantry division should be tied directly to CINCs who are involved in low intensity conflict. CINCs could ensure that mission essential training tasks for the specific region are the priority, conditions, and standards for training tailored to the region, and distractors that are not regionally LIC related are eliminated. The end result is a light infantry division that is better prepared to support complex political-military contingencies.

779. Military Infrastructure: Is it as Bad as the Nation's Infrastructure?, by Major Robert R. Derrick, USA, 110 pages.

This study discusses the infrastructure by contrasting the challenges faced by our national and military leaders in three crisis areas: Needs, Funding, and Management. Need is the gap between current conditions and required/desired conditions. Desired conditions include: state-of-the-art, like new, public expectation, actual use, and physically safe. Competition between funding for social programs and capital investment mirror balancing mission, BASOPS, and RPMA. Funding targets are improperly expressed as a percentage of the plant replacement value and not on need. The short tenure of leaders is detrimental to long range revitalization programs. Management decisions are now made with institutional knowledge and the "squeaky wheel" method.

This study recommends a detailed facility inspection to determine current condition versus desired conditions. Funds to close this gap using maintenance, repair, and replacement options is the need. An accurate PRV must be calculated to assist in obtaining funds. Army level leadership must develop long range goals that can be applied to 18-24 month commanders and reintroduce mandatory RPMA funding levels. Recommend procurement of management information systems with state-of-the-art software supported by high speed condition assessment equipment.

780. Confederate Cavalry at Chickamauga - What Went Wrong?, by Major Lawyn C. Edwards, USA, 206 pages.

This study investigates General Braxton Bragg's use of cavalry during the pivotal Tullahoma and Chickamauga Campaigns. As army commander, Bragg was responsible for organizing units, selecting commanders, and assigning missions. His decisions had significant impact upon the tactical and operational fortunes of the Army of Tennessee and on Confederate strategy. First, this investigation defines the unique heritage of American cavalry. Second, it addresses the actual employment of cavalry in the United States of America. Did these roles coincide with those of European cavalry? Did available army and cavalry leadership play a crucial part in the successes and failures of Confederate plans? Do the careers of Generals Bragg, Wheeler, and Forrest offer clues to their efforts at Chickamauga? Also, how did the elements of national power (political, military, economic, geographic, and national will), contribute to Confederate cavalry performance? This study concludes that blame is to be shared between the commanders involved and the system within which they fought. This study presents an indepth view of the performance of Confederate cavalry in this "victory" at the "River of Death."

781. An Analysis of Finance Operations from World War II to the Vietnam Conflict -- Was Any Progress Made?, by Major Jeffrey R. Eskridge, USA, 98 pages.

This study is a historical analysis of finance operations during World War II, the Korean Conflict, and the Vietnam Conflict. The military pay aspect of each war is examined in detail at the tactical level with the major focus being on four areas: wartime pay support, currency exchange, the environment, and organization for support.

Among the many conclusions which could be drawn from this analysis are: finance planners were proactive in their search for better ways to provide pay support as shown by the evolution from the manual Military Payroll System of World War II to the automated Joint Uniform Military Pay System (JUMPS) used during the Vietnam Conflict; Class A Agents were used extensively in all three wars and will likely be used to some degree in the future; currency exchange has been and will probably continue to be a tough task for planners; and finance soldiers will find themselves in more danger on the battlefield than in the past as support begins to be made available closer to the forward edge of the battle area.

The study concludes that the finance operations since World War II have consistently progressed. Lessons learned were documented, boards actively studied them, and action was taken to fix problems in the pay system.

782. Operational Interdiction, An Appraisal of United States Interdiction Doctrine for the Operational Level of War, by Major James W. Ewing, USA, 101 pages.

This study investigates past and current US Army and US Air Force doctrine and proposed joint doctrine for interdiction operations at the operational level of war. The investigation assesses the post-Korean conflict role of interdiction, analyzes the current status of interdiction, and evaluates the consistency, compatibility, and conformity of current US Army, US Air Force, and proposed joint interdiction doctrine. The study concludes that the United States does not have a coherent interdiction doctrine for the operational level of warfare. Discrepancies were discovered between US Army, US Air Force, and proposed joint interdiction doctrine. They range from use of non-standard terminology to lack of recognition of an operational level of warfare. The study recommends that a standard terminology be adopted, and provides one that reflects the three levels of warfare.

783. Can U.S. Army Engineer Units Assist Host Nation Coca Eradication Efforts in the Andean-Amazon, by Major John F. Fensterer, USA, 100 pages.

This study investigates the feasibility of using US Army engineer units in a counternarcotics role by providing coca plant eradication assistance to the countries of Bolivia, Peru, Columbia, and Brazil. It is an analysis and comparison of engineer unit capabilities and economic, cultural, political, and geographic factors affecting coca eradication in the Andean-Amazon region. The research hypothesis is that US Army engineer units can assist in these host nation efforts.

Coca eradication is part of an international effort to eliminate cocaine demand, trafficking, and production. Coca eradication depends on establishing viable alternate economics in the source countries.

The study concludes that US Army engineer units can assist host nation coca eradication efforts in the Andean-Amazon region by providing nation building projects, mobility/survivability training, and topographic services. Working as part of a combined effort, US Army engineer units can help build

the basic facilities countries in the Andean-Amazon region need in order to shift their economies away from cocaine production activities.

784. Fire Support for the Aviation Brigade (Heavy Division): A Doctrinal Analysis, by Major Richard P. Formica, USA, 235 pages.

This study is a doctrinal analysis of the response by current fire support doctrine to the fire support requirements of the aviation brigade in the heavy division. Fire support doctrine is inherently derived from maneuver doctrine. This thesis studied current division and battlefield, to identify its fire support requirements.

Division doctrine does not clearly establish employment roles and command relationships for the aviation brigade. As a result, doctrinal tenets established for the aviation brigade and the cavalry squadron are in conflict with each other and are inconsistent with division operations doctrine. Ultimately, fire support doctrine is unable to respond to the doctrinally established fire support requirements of the aviation brigade.

In order to place that employment doctrine for the aviation brigade in an appropriate perspective, this study traced the evolution of Army aviation, and the development of aviation doctrine, specifically leading to the aviation brigade of the heavy division. The views of Army, aviation, and field artillery leaders in the field, as published in professional journals and bulletins, were considered.

The principal conclusion of this study is that current fire support doctrine does not adequately respond to the historically and doctrinally established fire support requirements of the aviation brigade. Division level fire support is organized for the counterfire battle and is illequipped to provide close support to the aviation brigade. Fire support doctrine fails to compensate for the void created by the force structure.

In this study, the historical framework for aviation doctrine is established, the employment doctrine for the aviation brigade is explored, and fire support doctrine is measured in its response to the close support requirements of the aviation brigade. As a result, the groundwork is provided for a thoughtful assessment of current doctrine.

785. A Centralized Source of Information for the Military Working Dog Program, by Major Denzil F. Frost, USA, 326 pages.

This study is in response to the lack of comprehensive source of information concerning the production of high quality working dogs. Sources of information and the components required to establish a framework for a successful working dog program are identified and discussed by over 187 subject matter experts. The study concludes that (1) the lack of a centralized system to consolidate and standardize pertinent information about the production and further development of working dogs is an industry-wide problem, and (2) ample information, and expertise exist to ensure the optimum operation of any working dog program. Recommendations focus on the need to exploit outside expertise, and to establish an information management system designed to ensure that the sources of information described in this thesis are kept current. Implications for further research center on the absence of a master plan, fragmented command and control (management), inconsistent methods of procurement, and the impact of rejection rates on the quality and quantity of the end product.

786. The Communist Party of the Philippines Theory and Practice of United Front, by Lieutenant Colonel Rolando C. Garcia, Philippine Constabulary, 166 pages.

This study is an investigation and analysis of the united front (UF) theories and practices of the Communist Party of the Philippines as these impact on the Philippine insurgency. The research hypothesis is that united front building is as vital a component of the CPP strategy as is the armed struggle being waged by the insurgency movement.

This study profiles the nature and extent of united front work by the CPP; the ideological and practical bases of the strategy; the basic concepts and theories associated within; the organizational and operational manifestation of such concepts and theories; and the current situation of CPP united front building. The study further examines the role united front building plays in the furtherance of the revolutionary struggle of the CPP/NPA/NDF that has become an increasingly formidable politico-military force that can present a credible challenge to the continued existence of a democratic Republic of the Philippines.

Among the conclusions that could be drawn from the study are: that united front work is a mature CPP strategy for insurgency that is based on sound doctrinal and practical foundations; that united front building is complementary to the armed strategy for insurgency; that the probability of CPP victory is greatly enhanced by its success at UF building; that CPP UF work involves an intricate web of overt and covert organizations all working for the furtherance of the CPP insurgency struggle; and that the spread and depth of CPP UF work has reached alarming proportions. The study further concludes that there is a need to reassess government response to this growing menace.

787. The Role of the Fighting Vehicle on the AirLand Battle, by Captain William G. Gessner, Jr., USA, 133 pages.

This study examines the role of the fighting vehicle on the AirLand battlefield. It is an historical analysis of the evolution of the employment of fighting vehicles from 1914 through the Arab-Israeli wars. The study examines fighting vehicle employment by several nations, but it focuses on employment by the U.S. Army. The study also evaluates information derived at the National Training Center. Employment of fighting vehicles in combat is compared to the doctrine of the period to determine if the actual employment coincided with the available doctrine. The study concludes that the fighting vehicle has several roles. These roles are articulated in current doctrine, but the doctrinal sources do not emphasize the principal role of the fighting vehicle - as proven in combat - to provide direct fire support to the infantry. The study recommends that the future fighting vehicle be designed to primarily support the infantryman with direct fire and that doctrine should emphasize that role.

788. The Role of Jedburgh Teams in Operation Market Garden, by Major Robert Gutjahr, USA, 263 pages.

This study evaluates the six Jedburgh teams which supported Operation Market Garden during the period 11 September - 24 November 1944. The conceptual development of Jedburgh missions and the recruitment and training of men for these missions are first examined. The formation of the Dutch Jedburgh teams which comprised the Dutch Liaison Mission is then discussed. The status of the Dutch resistance following the aftermath of the damaging "NORD POL" counter intelligence operation and the operational situation in Europe which eventually led to the planning for Market Garden are provided as background for understanding the unique roles Jedburgh teams played in the operation. Each Jedburgh team's story is told in the context of the battles fought during Market Garden.

The Dutch Jedburgh teams had varying degrees of success. Special Forces Headquarters refined their operational procedures to support the airborne

divisions. Their roles were greatly affected by the unique nature of the flat, densely populated Holland countryside, by the tactical exigencies which characterized the battles during Market Garden, and by the lack of intelligence on the Dutch Garden, and by the lack of intelligence on the Dutch underground as a result of the "NORD POL."

The study concludes that the Jedburgh concept was good, but that poor intelligence, inadequate equipment, and lack of understanding of Jedburgh capabilities by division staffs and commanders hindered overall effectiveness. Jedburgh teams deployed too late to make a difference. Had they infiltrated earlier, their work with the resistance could have provided the manpower and intelligence to make a difference in Market Garden's outcome. Reviewing their histories as useful to modern day special operations planners as a means of evaluating SOF support to conventional forces in large theater operations.

789. Army Rotary-Wing Aggressors: The Key to Counter Helicopter Training, by Major Greg R. Hampton, USA, 229 pages.

This study is a comprehensive analysis of the U.S. Army's combined arms counter-helicopter training conducted at the Combat Training Centers (CTC's). It examines, through historical analysis, the factors that have resulted in the current status of Army counter-helicopter training and compares the Army's current helicopter OPFOR to the reality of the Threat. It concludes that there is a counter-helicopter training shortfall at the CTC's. It recommends the creation of three specialized OPFOR helicopter organizations which should utilize a mix of Air Force HH-3, Army AH-64 and OH-6 helicopters to train the combined arms team at the CTC's and home station unit training within regional areas.

790. Army Unmanned Aerial Vehicle (UAV) Requirements and the Joint UAV Program, by Major William R. Harshman, USA, 122 pages.

After many years of attempting to develop and field operational unmanned aerial vehicles (UAV), the UAV programs of the military services were halted at the direction of Congress. All non-lethal UAV programs were consolidated into a joint Department of Defense program. A result of this legislation was the publication of a joint master plan directing the future of UAV development. The purpose of this study is to determine if the Department of Defense joint unmanned aerial vehicle program will satisfy the UAV needs of the Army to conduct tactical intelligence collection.

This study employs a simple methodology. First, UAV requirements as defined by both the Army and the Department of Defense are identified. Second, the Army requirements are tested for validity within the framework of the Army's capstone war-fighting doctrine, AirLand Battle, and supporting doctrine for the conduct of intelligence operations. Third, the operational characteristics specified by the Army are compared with the same criteria as defined for the equivalent joint UAV system. The final step is the identification of differences in the two programs and determining the impact on future Army UAV operations.

The study concludes the Army has clearly defined its requirements for unmanned aerial vehicle operations. These requirements are valid and fully support the Army's war-fighting doctrine. The research finds significant differences exist between the Army and joint programs. However, these differences do not impact on the essential needs of the Army. The joint UAV program supports the UAV needs of the Army. After a slow start, the joint UAV program is proceeding rapidly. Barring funding constraints, the Army, and the other services, will soon possess an operational short-range (out to 150 km) UAV system capable of performing tactical intelligence collection.

791. The Role of Special Operations Forces in Counter-Narcotic Operations, by Major Mark A. Haselton, USA, 140 pages.

This thesis deals with the suitability of using Army Special Operations Forces in a counter-narcotics role. It describes briefly, the legislative reforms which have authorized increased US military involvement in a law enforcement role. It also describes the present drug epidemic in the US and in the area referred to as the Andean Ridge. A presentation of information is provided as to the social, political, and economic, both positive and negative, that the cultivation of coca and cocaine production has had in the countries of Peru, Bolivia, and Columbia.

The thesis describes the present structure of US Army Special Operations Forces and their capabilities. It recommends missions for each member of the SOF community to perform. Using the CARVER Target Analysis system, the thesis presents the drug trafficking organizations in terms of vulnerabilities that can be exploited by OSF.

The thesis concludes that the present missions of SOF are compatible with the increased military counter-narcotic missions. The unique capabilities of SOF, when combined with present law enforcement assets will greatly enhance the US capability to interdict illegal narcotics.

792. UAAF Pilot Retention: An Analysis of Air Force Initiatives to Improve Pilot Retention, by Major William J. Heinen, USAF, 133 pages.

The USAF is faced with the difficult problem of training, maintaining, and retaining a large active duty pilot force. Pilot attrition is a serious issue in the Air Force today. The loss of experienced pilots costs the Air Force in terms of training investment, experience, and overall combat capability. Low pilot retention rates are due to a combination of career irritants within the Air Force as well as the civilian opportunities available in the airlines and the Air Reserve Forces. This thesis examines the current problem and its effects on the force structure within the USAF. Next, it discusses and analyses leadership initiatives to solve the factors influencing pilot retention.

This study concludes that current USAF initiatives to increase pilot retention are appropriate and effective in solving identified and documented career irritants. These efforts should pave the way for an improvement in retention trends; however, the USAF will remain somewhat vulnerable to airline hiring trends as long as a national shortage of pilots exists.

793. Tactical Breach Operations in Modern Warfare, by Major Eric D. Hutchings, USA, 73 pages.

This thesis assesses the capability of mechanized and armored battalion task forces to breach obstacles in support of offensive operations. The study gives particular emphasis to analysis of the planning of breach operations at the battalion task force level. This study seeks the base cause for the high number of breach operation failures at NTC. The study analyzes recent NTC after action reviews to determine that cause. Examination reveals there is a considerable shortfall in the planning abilities of numerous battalion task force staffs and commanders. This shortfall has a particularly detrimental affect on breach operations. The basis of this shortfall is a lack of knowledge and adherence to the tactics, techniques, and procedures governing the planning of such operations. Compounding this problem are limited engineer and reconnaissance assets within the task force, as well as an insufficient engineer presence on the staff. Investigation reveals that the actions required to rectify the current shortfall in breaching capability within the battalion task force are attainable and relatively inexpensive.

794. Camp Chase, Ohio 1861-1965: A study of the Union's Treatment of Confederate Prisoners of War, by Major Jack Morris Ivy, Jr., USA, 105 pages.

Camp Chase, four miles southeast of Columbus, Ohio, began in May 1861 as a mustering center for units entering Union service during the American Civil War. By June 1861 it picked up additional responsibilities of housing Confederate prisoners captured by Ohio units during the earliest military actions of the war. It eventually expanded to hold 9,423 prisoners in January, 1865, which made it one of the larger Union prison camps. This study examines food, clothing, medical care and prisoner mortality, it confirms William B. Hesseltine's study of prisoners during the Civil War in his book, Civil War Prisons: A Study in War Psychology, and examines Confederate prisoner of war mortality, comparing it to Union soldier mortality from disease. The thesis concludes that overall, officials over Camp Chase were very successful in managing a prisoner of war facility.

795. The Impact of the Soviet Military Presence in the Arctic Region on Norwegian Security Policies, by Major Carl E. Johnson, USA, 145 pages.

This study is an analysis of the security issues in the North Cape region of northern Norway, including the Svalbard Islands and the continental shelf areas in the Barents Sea. It examines the geostrategic significance of the region, the Soviet force structure in the Kola peninsula and the Norwegian defense forces in the Arctic region. The paper then details the current political and economic issues between Norway and the Soviet Union that impact on security in the Arctic. Finally, it examines the Soviet goals and objectives in the North Cape area, and assesses the Norwegian defense and NATO reinforcement plans designed to counter Soviet aggression in the Arctic region. The study concludes that despite the force reductions in central Europe by both NATO and the Warsaw Pact, the strategic issues in the region will keep tensions between Norway and the Soviet Union high in the coming decade. The author postulates that the Soviets will be seeking a co-tenancy agreement with Norwegians for control of the continental shelf area between the North Cape and the Svalbard Islands. Finally, recommendations are made for the upgrade of NATO response capabilities in the Arctic region.

796. Mission Orders in the United States Army: Is the Doctrine Effective?, by Major John D. Johnson, USA, 145 pages.

This study is an analysis of the effectiveness of the U.S. Army's mission order doctrine at the tactical level. The study examines the reasons for decentralized command and control philosophies, the development of mission orders in the German Army, and the evolution of mission order doctrine in the U.S. Army. The study determined the doctrine's effectiveness by administration of a survey to selected middle grade officers. The study explains the development of the survey instrument and analysis of responses. The survey determined whether the participants had a common understanding of the term "mission," whether they could correctly identify the characteristics of mission orders, and the level of their personal experiences with mission orders. The primary conclusion drawn from the analysis was that the U.S. Army's mission order doctrine is not effective at the tactical level. The analysis of survey data revealed that a workable doctrine exists; however, it was not commonly known nor, by inference, understood by those officers surveyed.

797. Tactical Airpower at the Operational Level, by Major Daniel W. Jordan, III, USAF, 221 pages.

This thesis investigates the question: How can tactical Air Force (TAF) best support the operational commander in his maneuver of large ground forces? It defines the framework and activities of the operational level of war as a self-contained and synergistic system. Within that system, the conduct of air

and land operations using maneuver theory is examined. Various operational offensive maneuvers (penetration, envelopment and frontal attacks) and defensive maneuvers (retrograde operations, attack into a salient, and breakout from the encirclement) have been laid out. By comparing these situations against the various stages of air superiority, the thesis analyzes the spectrum of airpower options in those scenarios.

The conclusions are: (1) until air superiority is gained, the operational commander does not have freedom of action in the operational rear, (2) the TAF may have to become the operational main effort while ground forces are consolidating, (3) airpower can take away the enemy's freedom of action in the air and on the ground, (4) ground forces have the ability to create freedom of action for TACAIR at the tactical and operational level of war, (5) TACAIR may need the dedicated support of both air and ground forces to concentrate and cross a heavily defended FLOT.

798. Operational Raids: Cavalry in the Vicksburg Campaign, 1862-1863, by Captain Paul C. Jussel, USA, 85 pages.

This study is a historical analysis of the cavalry raids led by Confederate Major Generals Earl Van Dorn and Nathan Bedford Forrest in December 1862 and Union Colonel Benjamin Grierson in April 1863. Each raid is examined in detail based on the historical data available and focuses on the operational concerns and considerations of Union and Confederate commanders.

Some of the conclusions that can be drawn from this investigation are: the use of cavalry had evolved to large, independent units for separate operations; the operational benefit of cavalry was demonstrated first by the Confederacy, then refined and used by the Federals during the Vicksburg Campaign; the synchronization and orchestration of units from different commands against a common target produced significant benefits; and sufficiently strong units, capable of self-sustainment, can be detached from the main body of an army to operate behind enemy lines to destroyed the enemy infrastructure.

The study concludes that operational raids can be a significant economical operation to attack an enemy center of gravity without using the bulk of the army. The historical examples from the Vicksburg Campaign can be compared to today's force structure to show that capability is limited for the modern commander.

799. The National Guard in War: An Historical Analysis of the 27th Division (New York National Guard) in World War II, by Major Charles S. Kaune, USA, 173 pages.

This study is an historical analysis of the 27th Division in World War II. The performance of that division is illustrative of all divisions which were mobilized in 1940-1941 from the National Guard. The focus was on personnel, training, organization, military education of the leadership, and external influences.

A number of conclusions resulted from this study. As was the case with all National Guard divisions, the Congress denied adequate funds to equip or train them to a standard which would enable them to function in war. Once mobilization began the Army systematically disintegrated the National Guard divisions sending it's soldiers to service schools and to other newly activated divisions. The Army's theory that all soldiers were but interchangeable parts that could be inserted anywhere disregarded the major potential contribution of the National Guard. This contribution was cohesion developed through years of close association. The senior leadership of the National Guard was a particular weakness in both tactical and technical matters and leadership.

The upshot of the study is that the post-mobilization Army failed to capitalize on the strengths of the National Guard, its cohesion, while permitting its gravest vulnerability, the ineptitude of the senior leadership.

800. United States Army Power Projection in the 21st Century: The Conventional Airborne Forces Must be Modernized to Meet the Army's Strategic Force Requirements and the Nation's Future Threats, by Major Michael J. Kazmierski, USA, 181 pages.

The modernization of the United States airborne forces is long overdue. As the Army transitions from a European-based forward deployed force to a "versatile deployable and lethal" Army, the role of the airborne forces must increase. Unfortunately, the focus of the military has been on the defense of Europe. Consequently, the airborne forces have not received the resources necessary to be able to deal with a modern mechanized threat or a 21st Century Third World threat. The author contends that without the immediate modernization of these forces, there is the increasing risk that the Army will be unable to rapidly respond as a strategic force in the very near future. The author provides recommendations for the modernization of the United States' airborne forces, based on the requirement for a successful forced entry capability in a future threat environment. This study concludes that the current United States airborne force is the only force that can provide this nation with the capability of rapidly projecting combat power, anywhere in the world, in the defense of vital interests. However, unless this force is provided significantly more firepower, mobility and survivability, while remaining strategically deployable, the Third World 21st Century threat will prohibit its use.

801. The Interim Close Air Support Aircraft - Is the A-10+, A-7+ or the A-16 the Most Suitable for the High Threat Environment, by Major Kevin G. Kenkel, USAF, 148 pages.

DOD is in the process of finding a replacement aircraft for the 1990s CAS mission. The Air Force has proposed a two-step process. First, an aircraft is necessary to perform the near-term CAS mission in the 1990s. The Air Force is also contracting to purchase a CAS aircraft for CAS operations in the next century. The thesis studies three aircraft proposals for the 1990s CAS mission to determine if one is more suitable for the high threat CAS mission.

The thesis concludes that the A-7+ and the A-16 are equally capable of performing the high threat CAS mission for the 1990s. The A-10+, even with major airframe and engine modifications does not possess enough speed to effectively accomplish the mission. The aircraft is extremely susceptible to attack primarily due to slow speed. Additionally, the A-10+ lacks the flexibility to accomplish the entire CAS mission as required by AirLand Battle doctrine. The A-10+ should not be considered a viable alternative for the CAS mission of the 1990s.

802. Wall of Fire -- The Rifle and Civil War Infantry Tactics, by Major Richard E. Kerr, Jr., USA, 122 pages.

This thesis examines the effect the rifle had on infantry tactics during the Civil War. It traces the transition from smoothbore to rifle and the development of the Minie ball. The range and accuracy of various weapons are discussed and several tables illustrate the increased capabilities of the rifle. Tactics to exploit the new weapon are examined, primarily those of William Hardee. Using Hardee's tactics as the standard rifle tactics before the war, the change in how infantry soldiers fought is documented with two battle analyses. The 1862 Maryland Campaign shows the start of tactical evolution as soldiers seek cover, expend large quantities of ammunition and

are decisively engaged at greater distances. During 1864 Wilderness-Spotsylvania battle, the concepts of fortification defense and skirmish offense take hold. Examining several current books that deal with the rifle and its effects, the thesis concludes that the rifle's increased firepower was a major factor in the move away from Hardee's formation tactics.

803. Soviet Interests in Afghanistan and Implications Upon Withdrawl, by Major Khalid Nawaz Khan, Pakistan Army, 160 pages.

This study discusses the geo-strategic importance of Afghanistan in the context of overall Soviet strategy in Southwest Asia. Considered as a Soviet 'backyard' in the past, Afghanistan sprang to limelight in 1979 following the Soviet invasion. After nearly a decade of occupation, the Soviet Union withdrew its military forces from Afghanistan in a bold and unexpected move. This action not only stunned but also confounded the world with regards to the actual motive behind the withdrawl. Though, undoubtedly, the Soviet policy in Afghanistan has received a setback, it cannot be termed as fatal. Indeed, in the long run, the Soviets tend to gain rather than lose in Afghanistan and in the Southwest Asian region as a whole.

The thesis, therefore, seeks to determine the course of the future Soviet strategy in Afghanistan in wake of changed circumstances following the withdrawl. Additionally, the impact of the withdrawl on Pakistan and Iran, the two frontline states, is also examined.

The study concludes that the Soviets have not abandoned their interests in Afghanistan but will, in the future, pursue the same goals and objectives through a more discreet, cost effective and indirect approach. Soviet hostility towards Pakistan could assume dangerous proportions for the latter, while Soviet influence in Iran is expected to receive a boost as a result of the withdrawl.

804. The Army in Space: An Assessment Today for Tomorrow, by Captain Daniel R. Kirby, USA, 141 pages.

The Army has a future in space and must continue to explore and expand its exploitation of space capabilities in support of Army missions as a part of the progressive evolutionary process of modern warfare. Senior Army leadership recognized this assertion when in June 1985 it established Army Space Policy as the full exploitation of space capabilities which will enhance and contribute to the successful accomplishment of strategic, operational, and tactical missions. This research assesses the Army's space exploitation endeavor, using a "macro, system thinking," methodology.

Following the "Checkland Systems Thinking" methodology, the research begins with an evaluation of the space medium including space characteristics; space systems capabilities and potential; space law; and recent Army space history. The research also evaluates external influences such as the threat, technology, and changing geopolitical environment. Drawing upon these assessments, the Army "space exploitation program" is modeled as represented by the Army proponent for space, the Army Space Institute, as it actually functions today.

The research continues with the construction of a conceptual model of the Army "space exploitation program" as it should be. The conceptual model is built based upon the requirements of the Army Space Policy, external environmental influences, and force development principles.

Finally, the two models, actual versus conceptual, are compared, resulting in recommendations which, if implemented, will facilitate the Army's efforts to rapidly expand the implementation of the Army Space Policy in

response to the contrasting Army objectives of a reduction in force structure while maintaining and/or enhancing readiness.

805. Medical Implications of Lasers on the Modern Battlefield, by Major William Joseph Klenke, USA, 131 pages.

This thesis examines the impact on medical units caused by the proliferation of lasers on today's battlefields; it demonstrates that a significant number of casualties are possible and shows the need for a more rigorous modeling to quantify and characterize them.

One important conclusion is that the major impact of laser weapons will be on the tactical commander, not the medical unit. The commander must recognize and understand the effect of the laser battlefield on soldiers, units, and leaders. Training, preparation, and appropriate tactics are necessary to conserve the unit's strength for the decisive action.

Three engagements (light, armor-augmented light, and heavy battalions) are defined using the TRADOC Common Training Scenario and the CGSC Tactical Commanders Development Course (TCDC) computer simulation. The Lawrence Livermore National Laboratory Air Defense Weapons model determined the laser's propagation. Each engagement was studied to estimate the number of laser casualties.

The bibliography provides an extensive review of unclassified documents dealing with lasers and directed energy weapons. Specific areas investigated include tactical and medical laser-related doctrine, the status of laser technology and deployment, and threats, bioeffects, and the availability of medical support. A brief history of the efforts by the USSR's and U.S.'s to develop laser weapons and the status of current military laser technology is also inserted.

806. The 1985 U.S. Army - U.S. Air Force Joint Service Agreement for Base Defense and Its Impact on Air Base Ground Defense: A comparison of the joint agreement with air base ground defense (ABGD) requirements and capabilities, by Major Donald T. Knowles, USAF, 88 pages.

This study reviews the historical evolution of ABGD from the post-Vietnam era to the present day concept of operations and analyzes requirements versus capabilities. Requirements were identified by defining the postulated threat that may target air bases and the division of labor for the protection of air bases in rear areas of operation. The division of labor discussion answers capabilities through: defining rear area operations and forces available to respond to threats to air bases; defining host nation and MP responsibilities; and exploring SP ABGD doctrine and capabilities to counter the threat in the rear area of operations. Both requirements and capabilities are compared to determine the survivability of air bases and ability of US forces to protect US Air Force sortie generation.

The parameters of this thesis assume a conventional war. The focus of this study is Central Europe, specifically Germany. Peacetime terrorist or covert operations are not addressed except for those which might take place preceding the outbreak of general war.

The research methodology is centered on a review of available literature and analysis of pertinent doctrine. Literature search was divided into six areas: historical background; threat; rear area operations; army responsibilities and capabilities; host nation responsibilities; and current SP capabilities and responsibilities. Current doctrine was explored to provide capabilities of existing forces and historical lessons learned.

The study concludes that the established doctrine for defense of air bases is adequate, provided both the US Army and US Air Force fulfill their respective obligations as defined by the agreement. AirLand Battle doctrine relies on the Air Force to accomplish its mission. Without dedicated Army or host nation forces for ABGD, sortie generation may be compromised.

807. The Role of Army Intelligence in the Domestic War on Drugs, by Major Patricia F. Knudsen, USA, 182 pages.

In 1989 the Secretary of Defense directed that DoD would fully support the President's National Drug Strategy which identified the illegal trafficking of drugs as a matter of national security. To support that effort, the Army Counternarcotics Plan lays out the basis for the employment of Army units in support of takings from the CINCs.

This paper investigates the role Army intelligence can play in the domestic aspect of the war. It addresses identification of law enforcement requirements and Army intelligence capabilities that are feasible and suitable for employment against drug targets, and discusses the acceptability of those intelligence applications. The laws that govern military support to law enforcement and intelligence activities which impact on Army intelligence's role in the drug war are addressed.

808. "Systematic Watch" in the Corps Rear Area, by Captain Neil C. Lazendorf, Jr., USA, 153 pages.

This thesis analyzes the formal and informal information gathering and reporting processes which take place in the rear area of a forward deployed (US) corps in Western Europe. The thesis examines the information gathering capabilities, responsibilities and "opportunities" of organizations typically located within or transiting the corps rear area, to include host nation civilian and military assets. The study identifies information gathering shortfalls of the corps, and recommends ways to enhance information gathering and reporting in the corps rear area.

The study concludes that the deputy corps commander lacks sufficient dedicated surveillance resources to monitor enemy activity and other conditions throughout the vast corps rear area. Because rear operations are an economy of force effort, the deputy corps commander must fully exploit other capabilities available to him. Viable contributors to surveillance of the corps rear area include units normally tasked to provide direct support to corps rear operations; bases and base clusters; transiting units, to include overflying aircraft; host nation assets; and other military forces located in the corps rear area, but not integrated into a base or base cluster. The command and control facilities necessary to accomplish this exist; however, the doctrine does not.

The theses argues that a reliable system for gauging and monitoring activities in the corps rear area can be created without increasing force structure, but must fully exploit the information gathering capabilities of those assets located within and transiting the corps rear area. Specific recommendations include the creation of a rear area command structure to streamline information gathering and reporting in the corps rear; organization of the corps rear are into ROAC areas of responsibility for the purpose of organizing and coordinating information gathering activities; and the development of an integrated base detection system to help fill gaps in surveillance coverage.

809. The Requirement for and Subsequent Development of a Training Scheme for the Officers and Staff of the British Army 1799 - 1858: A Study of the Evolution of the Military Training System for British Officers from the Original Proposals for a Military College of Three Departments to the

Establishment of the Staff College, by Major NA Leadbetter, MBE REME, British Army, 156 pages.

This study is an historical analysis of the military training scheme for British officers which was proposed by Major General John Gaspard Le Marchant in 1798 and adopted by the British Army in 1799. It examines the social and political climate of the time and discusses the organization of the British Army at the start of the nineteenth century. The influence of senior military leaders, the Government and the Crown during the formative years is investigated in detail. The employment of the staff in war is also described.

Some conclusions which may be drawn from this study are: the scheme was proactive during a time of reform; the influence of government ministers was intrusive; the momentum gained during the first fifteen years was lost between 1815-1854; the Crimean War showed the inadequacies of the military planning staff; the scheme was successful in achieving the aims set for it by Le Marchant.

The study concludes that Le Marchant's proposals, modified by the Military Committee in 1800, were sound. The Staff College resulted from an appreciation of the inadequacies of what was basically a sound system which had been neglected.

810. Why did the Strategic Hamlet Program Fail?, by Lieutenant Colonel Peter F. Leahy, Australian Army, 184 pages.

Over the period 1961 to 1963 the Government of Vietnam introduced the Strategic Hamlet Program, which was designed to be the central part of a comprehensive plan to pacify South Vietnam. Pacification was to be achieved by isolating the rural population from the Viet Cong communist guerrillas. The aims of the Strategic Hamlet Program were expressed as security, economic development, social advancement, and political participation. By instituting reforms the Government of Vietnam believed that it could win the allegiance of the people and thus defeat the Viet Cong.

The Strategic Hamlet Program eventually failed because of inadequate planning and coordination, inadequate resources, and unrealistic timetable problems with citing and construction, and inadequate and falsified evaluation procedures. In addition there was a lack of commitment to the program, especially from President Diem. Another factor contributing to the failure of the program was the impatience and intolerance of the United States towards the government of President Diem. Above all, the peasants, who had been identified as the focus in the war against the insurgents, rejected the program because the promised reforms did not materialize amid the corruption and bureaucratic inefficiency associated with the implementation of the program.

811. Security of Association of Southeast Asian Nations (Asean) Member-States in 1995: Is a U.S. Military Presence Necessary?, by Major Michael Lim Tech Huat, Singapore Armed Forces, 238 pages.

With the recent claimed phased withdrawal of the Vietnamese occupation forces from Cambodia in September 1989, it may appear that ASEAN has at least attained what it had sought for at the UN for the last decade since the Vietnamese invasion in December 1978. Finally, the single most worrisome threat is being removed. But the author contends that this is not the case. Even if the author contends that this is not the case. Even if the claimed withdrawal is true, there are many other problems that could threaten the stability of the region. These include both external threats that arise as a result of superpower and major power interests in the region, and the internal problems of ASEAN member-states.

This study shows that Soviet interests/influence in the region is a significant potential indirect threat in the next five years. Presently, only a US military presence is able to counterbalance the Soviets'. This US presence also serves to alleviate and attenuate the internal problems of the member-states to a significant extent. The internal problems include economic, racial, political, and social issues.

Possible alternatives to a continued US military presence include a military strong Japan, or a Sino-Japanese alliance, both of which are undesirable to ASEAN. Other possibilities include an ASEAN defense pact, multilateral or bilateral defense agreements, security links with external powers, or a combination of these. However, none of these is wholly capable to replace the US presence in the Philippines. This study concludes that the presence in of a US military is a lesser evil when compared to the situation without them.

On balance, until ASEAN's concept of Zone of Peace, Freedom and Neutrality (ZOPFAN) is accepted by the superpowers and major powers, which the author thinks is unlikely, a continued US military presence in the region is essential for the continued stability and prosperity of ASEAN in the next five years.

812. Pakistan and Nuclear Weapon Proliferation: A Historical Analysis of the Pakistani Nuclear Program 1947-1990, by Major Masood Ahmed Khan, Pakistan Army, 124 pages.

The study is a historical analysis of the Pakistani nuclear program which aims at bringing out the compulsions, restraints, and constraints which forced Pakistan to undertake a nuclear program. The perceptions and responses, past, present, and future, of the superpowers and some of the affected regional states are also discussed in the backdrop of the Pakistani nuclear activities.

The development of the Pakistani nuclear program falls under two time frames, i.e., the pre 1971 period and the post 1971 period because of the differences in the scope and direction of the two. The paper follows a chronological pattern but it analyzes various factors using a combination of the deductive, the compare-and-contrast, and the cause-and-effect pattern.

Each factor contributing to the Pakistani nuclear program is examined in detail. The pre 1971 period highlights three major factors; international developments in the nuclear field, desperate energy requirement and lack of natural energy resources. The post 1971 synthesizes four factors, i.e., the oil crisis of 1973, quest for security and survival, the credibility of the alliances and the Indian nuclear explosion of 1974.

The study concludes that the analysis will provide a new framework for the future investigation of other such like complex situations.

813. Sandinista Counterinsurgency Tactics: An Examination of the Counterinsurgency Tactics Employed by the Sandinistas Against the Contras in Nicaragua Between 1983 and 1988, and the Factors the Influenced Their Development, by Major James M. McCarl, Jr., USA, 164 pages.

This study describes the organization of the primary Sandinista counterinsurgency organizations, the tactics they employed against the Contras, and the influence of many factors in the development of these organizations and their tactical doctrine. These include: the Sandinista's experience as guerrilla fighters, the military influence of the Soviet Union and Cuba, the impact of the Contra and U.S. military threats, the military aspects of terrain and weather, and the effects of tactical and strategic time

factors. Much of the material is from primary sources, and the study contains original tactical diagrams derived from these sources.

The study concludes that the Soviets and Cubans played a central role in shaping these tactics and organizations through their military advisors in Nicaragua and with the provision of substantial military equipment. Nonetheless, the other factors above caused the Sandinistas to modify the Soviet/Cuban doctrine to their own needs.

814. The Influence of Japanese Public Opinion and Government Policy on the Planning and Execution of U.S.-Japanese Bilateral Ground Exercises, by Major Donald J. McGhee, USA, 136 pages.

The evolution of U.S.-Japanese bilateral ground exercises has been characterized by progressive development but also by continual opposition from various segments of Japanese society and government. While many factors have influenced the evolution of bilateral ground exercises, two factors--Japanese public opinion and government policy--have played a particularly important role.

The historical effects that Japanese public opinion and government policy have had on the evolution of Japanese defense policy and military cooperation with the United States served as a basis for this investigation.

This study concludes that, to a considerable degree, negative Japanese public opinion and government policy have had on the evolution of Japanese defense policy and military cooperation with the United States served as a basis for this investigation.

This study concludes that, to a considerable degree, negative Japanese public opinion and corresponding local government recalcitrance, government policy, pacifism, the news media, special interest groups, and the political opposition have shaped and continue to influence the planning and execution of U.S.-Japanese bilateral ground exercise. These influences threaten U.S. Army-JGSDF capabilities to fight bilaterally in a future conflict. Among the most significant consequences of this influence are insufficient, unrealistic training exercises, the lack of bilateral forces to train on the specific ground they would fight on.

815. Buffalo Soldiers: The Formation of the Tenth Cavalry Regiment from September 1866 to August 1867, by Major Anita Williams McMiller, USA, 109 pages.

This study documents the history of the Tenth's formation at Fort Leavenworth, Kansas from 25 September 1866 to 5 August 1867. The study's focus is on the assignment of personnel, training of recruits, and the events surrounding the activation of the individual companies.

An overview of the Black American military experience prior to 1866 summarizes military and related events to provide the context for the formation of the Tenth. A summary of the legislation that formed the Tenth is also included. In addition to the detailed chronology of events, the study documents the leadership and professional influence of Colonel Benjamin Grierson, the regimental commander.

The study concludes that as a result of the regiment's formation at Leavenworth, the Tenth performed its first missions successfully, and subsequently helped to settle the West. The conclusion includes suggestions and areas for further study.

816. Battalion Command in Combat - Forward Edge of Combat Power: A Leadership Analysis of Selected Battalion Commanders in Combat in World War II, Korea and Vietnam with implications for Future Combat Leaders, by Captain Rick Megahan, USA, 386 pages.

Based on the construction of detailed combat narratives and the application of current U.S. Army leadership doctrine as the assessment methodology, this study conducts a leadership analysis of three Distinguished Service Cross-winning battalion commanders of World War II, Korea and Vietnam. The performances of LTC Benjamin Vandervoort at St. Mere-Eglise on 6-7 June 1944, of LTC James H. Lynch at Hill 314 in Korea on 12 September 1950, and of LTC Harold Moore at LZ X-Ray in Vietnam on 14-16 November 1965 are examined in terms of the tasks, the skills, knowledge, and attitudes (SKA), and the leadership performance indicators (LPI) which support the nine leadership competencies of FM 22-100, Military Leadership.

Foremost among the conclusions which are evident from this study are the following skills of battalion command which contribute to success in combat: rapid battlefield planning is vital to tactical flexibility and situational response; mission orders to subordinates is the most effective approach in combat; the commander must endeavor to maintain the initiative when confronting the enemy; fire support is crucial to infantry success; innovation, based on sound doctrine, is a catalyst for solving situational problems; commanders must coach subordinates during combat; communications is absolutely fundamental to success in combat; pre-battle training and the training conducted between engagements has great impact on soldier performance; casualty evacuation is one of the battalion commander's highest professional obligation; to succeed, the battalion commander must command forward; and, the battalion commander must define success for his subordinates.

This study concludes that the leadership competencies and their supporting SKA and LPI constitute a valid assessment tool for analyzing the combat performance of past - and future - battalion commanders. But on the whole, more of the warfighting focus of AirLand Battle doctrine should be incorporated into the performing standards to make the competencies more useful as a leadership evaluation tool during field training exercises or rotations at the National Training Center or the Joint Readiness Training Center.

817. Is A Turretless Tank a Viable Option for the United States Army: An Examination of the Factors That Have Influenced Army Tank Design and Use of Those Factors to Determine if a Turretless Design is a Viable Option for Future Army Tanks, by Major Gary L. Moore, USA, 177 pages.

This study is an examination of four areas, historical U.S. tank development, U.S. national military strategy, Army doctrine, and technical design considerations, that have had an impact on the design of U.S. Army tanks. The aim of this study is to identify the influences each of the aforementioned categories have had on the design of U.S. Army tanks, the implications these offer for the design of future tanks and from these ascertain the viability of a turretless tank as a developmental option for the U.S. Army. The impacts of U.S. tank design were gleaned from historical writings on the development of U.S. tanks, a large body of literature on tank technical design considerations, official U.S. government statements of the national military strategy and Army doctrinal warfighting manuals. Analysis by the author of the above impacts were considered in the context of the current national and international situations.

This study concludes that a turretless tank is viable option for the Army to pursue. A turretless tank provides significant potential benefit in the reduction of tank cost and weight. Additionally, reduced size leads to

improved survivability. The Army's challenge is to continue to defend global U.S. interests in an era of reduced military spending. Development and fielding of a turretless tank is one of the ways the Army can meet this challenge.

818. CBU-89 Gator Mines in the Future AirLand Battle, by Major Terry L. New, USAF, 124 pages.

This study examines the readiness of the United States Air Force and Army to employ CBU-89 Gator mines in a future conflict. Since CBU-89 is a new weapon with unprecedented offensive capabilities for land mine warfare, required joint planning and coordination procedures have not yet been validated. Army engineers are tasked with the responsibility to develop obstacle plans and track the status of all minefields, friendly and enemy, regardless of the method of delivery. These requirements require active coordination between Army engineers and Air Force liaison officers to a degree which has not previously been necessary.

Gator mines support doctrinal concepts for the future AirLand Battle. Gator is designed to overcome most countermining capabilities, or make clearing the mines expensive in terms of resources and time. The capability to delay enemy armor without destroying tanks results in commanders being able to shape the battlefield to their advantage for decisive engagement. Doctrine is adequate to support Gator employment in the interdiction role, which is jointly recognized as its primary mission. However, Army doctrine is deficient in defining capabilities for Gator mines in offensive counter air, close air support, and exploitation and pursuit missions.

819. Armed Escort for Special Air Operations--An Operational Concept, by Major Richard D. Newton, USAF, 151 pages.

This study hypothesizes that armed escort is required to protect special operations lift helicopters inserting, extracting, or resupplying SOF ground teams deep in the enemy rear. It compares the escort doctrine and tactics utilized by conventional air assets with current special operations tactics in light of the rapidly increasing threat among lesser developed nations.

This study is based upon a Soviet-style, Third World threat. As the Soviet Union continues to modernize and field new air defense systems and interceptor aircraft, much of the older and some modern equipment is sold or given to allies, clients, and surrogates. The proliferation of highly capable weapons among developing nations has improved their air defenses and significantly complicated the problem of special air operations attempting clandestine penetrations.

Beginning with the historical perspective of armed escort, then examining the current and projected threat, this study concludes that armed escort is indeed required to counter the increasingly capable and proliferating air defense threat. Based upon Phase One of the Concept Based Requirements System, Concept Formulation, this thesis proposes an Operational Concept for armed escort.

The doctrine and tactics for armed escort during deep air assault and deep attack missions already exist in Army and Air Force doctrinal and tactics manuals. Conventional doctrine needs modification, though, to meet the unique requirements of clandestine penetrations 200 or more miles in depth. Part of the adjustment has to be in mindset--forcible entry is the least preferred option in most special operations Direct Action or Special Reconnaissance scenarios.

Many questions and issues raised by this study warrant further attention. Among these are electronic combat implications, appropriate mix of

weapons, and training issues. The intent of this thesis, however, was to propose the initial Operational Concept within allowable classification limits and stimulate future quantitative and qualitative studies.

820. The Advanced Field Artillery System-Cannon Battery: Opportunity for Change in the U.S. Field Artillery Battery. An examination of the functions of key battery personnel in an AFAS-C battery, by Captain Joseph P. Nizolak, Jr., USA, 163 pages.

This study is an analysis of the capabilities of the Advanced Field Artillery System-Cannon (AFAS-C), a developing weapons system that the U.S. Army plans to field at the end of the 20th Century. It compares the capabilities of this system with the duties of the battery commander, the firing platoon leader, and the platoon fire direction officer according to the Tactics, Techniques, and Procedures (TTP) manual for the Howitzer Improvement Program (HIP) battery. The objective of this comparison is to determine if the duties are appropriate for the AFAS-C battery and, if not, to propose an alternative.

The study reviews AirLand Battle doctrine, the projections of AirLand Battle-Future, and the fire support doctrine for both. It also identifies the capabilities of the AFAS-C and another future automated system, the Advanced Field Artillery Tactical Data System (AFATDS).

The author concludes that the AFAS-C battery commander should become a battalion task force Fire Support Coordinator (FSCoord) and advocates recreation of the position of battery executive officer as an Assistant FSCoord. Another conclusion is the platoon leader will be more effective operating as the section chief of a "command howitzer."

821. General George C. Marshall, Emergence of a Politician, 1 September 1939 to 6 December 1941. A Historical Analysis of General George C. Marshall's Political Role During the Two Years Prior to the Start of World War II, by Major Howard A. Olsen, USA, 143 pages.

This study is a historical analysis of the political growth, development, and influence of a former Chief of Staff of the Army, General George C. Marshall, during the period 1 September 1939 to 6 December 1941. These first two years of General Marshall's tenure as Chief of Staff were critical in rebuilding and modernizing the Army and the Nation's defense establishing prior to the start of World War II. During this period General Marshall's primary efforts centered on securing appropriations for equipment, personnel, and training. These efforts were political in nature because they involved close association with the executive and legislative branches of government.

This thesis depicts how General Marshall's early career prepared him for the Capital's political environment. It capitalizes on three distinct legislative acts to illustrate the growth of General Marshall's political skill and influence during the period: The Burke-Wadsworth Act of 1940; the Lend-Lease Act of 1941; and the 1941 legislation which extended the Burke-Wadsworth Act. Finally, the study develops the premise that General Marshall by the start of World War II had mastered the politician's craft and used that capacity to enact legislation which accommodated the Army's transformation from poorly prepared peacetime organization to wartime goliath.

822. Employment of Direct Fire Systems During Offensive Operations, by Major Peter J. Palmer, USA, 358 pages.

This thesis examines some of the reasons behind task force commanders inability to properly employ their direct fire systems during the conduct of offensive operations at the National Training Center (NTC). The thesis

develops a set of criteria that is critical to the proper employment of direct fire systems during offensive operations. Using these criteria as a basis of analysis, this study reviews current NTC direct fire studies, doctrine and unit SOPs to identify shortfalls, discrepancies, and problems that may affect the proper employment of direct fire systems during offensive operations.

This thesis finds that NTC direct fire studies highlight numerous problems in direct fire performance based on the established criteria. These problems can be directly attributed to shortfalls and discrepancies in doctrinal manuals, unit SOPs and unit training practices. The most significant problems include the failure to emphasize the integration of direct fire systems as part of the scheme of maneuver and the failure to provide the necessary tactics, techniques and procedures (TTP) to do so.

This thesis makes several recommendations on what changes should be made to doctrine, unit SOPs and unit training practices. It also points to several areas of future research that would benefit the continued analysis of this direct fire problem.

823. The Aerial Dogfight: A Valid Part of Today's and Tomorrow's Air War, by Major Gerard A. Pelletier, USAF, 151 pages.

An Examination of four different conflicts and the factors that prevented technology from eliminating the aerial dogfight and the need for aircraft and their pilots to be able and ready to fight effectively in the aerial dogfight.

This study explores the evolution of technology and the aerial dogfight. It looks at how technology has tried unsuccessfully to eliminate the need for aircraft to engage in close-in aerial combat known as "aerial dogfights," to achieve air superiority or just defend themselves and survive from hostile aircraft. To show this, the study looks at four different conflicts: the United States in Vietnam, the Israelis in both the Yom Kippur War and Operation Peace for Galilee, and the British in the Falklands War. Four factors examined which vary in prominence in each of these conflicts are: financial restrictions, limitations of technology, rules of engagement, and the "fog of war."

The study concludes that technology as we know it today or in the foreseeable future will not be able to totally eliminate the aerial dogfight in a major conflict. As technology improves the effectiveness of weapons, it also improves the counters to these weapons. Financial restrictions in the form of budget constraints during times of peace have been a limiting factor to a country's technological advances prior to a conflict, and directly influence how a country will be able to fight at the start of any conflict. Rules of engagement and the "fog of war" further limit technology from being employed in its optimum designed application during a conflict.

824. Rule-Based Expert Systems in the Command Estimate: An Operational Perspective, by Major Timothy R. Puckett, USA, 221 pages.

This study is an analysis of how the branch of artificial intelligence known as rule-based expert systems can be used to assist in the performance of the command estimate as prescribed in Command and General Staff College Student Text 100-9, The Command Estimate.

Current command and control systems are analyzed to determine why battlefield information management is not successful. Trends in civilian decision aids for corporate executives are introduced and contrasted with military requirements. The capabilities of rule-based systems are discussed and a base line for their use in the command estimate is introduced.

Observations of the command estimate made by the Center for Army Lessons Learned (CALL) and the Army Research Institute for Behavioral and Social Sciences (ARI) are analyzed to determine areas of the command estimate that can benefit from assistance with rule-based systems.

A detailed examination of the flow of information through the command estimate process is conducted using techniques of systems analysis. Additionally, the Intelligence Preparation of the Battlefield (IPB) is analyzed using the same methodology. This study of the information flows and the types of information managed by each process indicates areas that can be enhanced with assistance by rule-based systems.

The study concludes that rule-based systems can be used to automate the IPB process and significantly contribute to portions of the command estimate. The role these systems can play is best described as a staff aid. Functions would include expression and dissemination of the commander's intent, creation of planning time lines and synchronization matrices, standardization of mission statements, performance of the IPB, assistance and maintenance of task organizations, tracking of critical events, and creation and dissemination of warning orders.

825. Army Professionalism 1877-1898: Myth or Reality, by Major Gary D. Rhay, USA, 106 pages.

This study examines the efforts to promote professionalism in the Officer Corps during the period 1877-1898. Initially, definitions are provided to identify the focus of the study and an examination of key 19th century concepts is made. Then issues affecting the growth of professionalism in American are discussed, followed by evidence of the growth of institutional and individual professionalism in the Army.

The conditions encountered by the bulk of the Army during this time were daunting. However, forces were dramatically altering American society. External influences and the operational environment interacted to forge conditions conducive to military professionalism.

Throughout this period a variety of measures were pursued which created an institutional basis for professionalism, leading to the acceptance of the unique position of soldiers in society and the requirement for expertise. Within the Officer Corps there were indicators of a rising interest in the profession. These efforts were evolutionary in nature. The definition of the Army's role and subsequent efforts to prepare the Officer Corps represented the pursuit of national security. It was a course which would ultimately become irreversible. All of the divergent effort was to coalesce later to produce an Army for the twentieth century.

826. The Validity of Soviet Military Power: An Analysis of the Role of the Public Information Aspect of the Department of Defense as it Specifically Pertains to the Publication of Soviet Military Power and a Critique of that Publication by Author Tom Gervasi, by Lieutenant Commander John A. Roberts, USN, 124 pages.

This study provides a brief review of the role of the Department of Defense publication Soviet Military Power and a detailed analysis of Tom Gervasi's book, Soviet Military Power *The Pentagon's Propaganda Document, Annotated and Corrected. Gervasi reprinted the entire text of Soviet Military Power with the inclusion of more than 700 annotations in the margins. In his book, Gervasi charged that the Defense Department lied and distorted the truth about the true nature and extent of Soviet Military strength.

A comparative analysis is made of Gervasi's statements with his own stated references and other reliable sources to demonstrate the validity of

the information in Soviet Military Power. Gervasi makes three basic errors in his analysis. First he incorrectly perceives that Soviet Military Power is attempting to prove an overall Soviet superiority over U.S. military strength. Secondly, the many numbers and facts in Soviet Military Power disputed by Gervasi can largely be corroborated by the very sources Gervasi endorses. Thirdly, his accusations of deception in Soviet Military Power are often illogical or trivial. Additionally, he makes numerous comments that editorialize about related subjects but do not directly contradict information in Soviet Military Power.

This study concludes with the recommendation that the Department of Defense continue to publish information for the general public regarding the threat to our security from Soviet or other sources. This study also encourages that books such as Gervasi's be adequately refuted.

827. Joint Air Combat in the Close Air Battlefield, by Major Lawrence L. Rolfs, USAF, 258 pages.

This study examines the development of friendly and threat weapons systems and tactics for countering close air support (CAS). A review of historical developments in this area from World War I up to the present provides the background for establishing the requirement for joint and combined counter CAS to defeat the new generation of Soviet attack aircraft and counter air helicopters. The historical background also highlights the lack of development of USAF counter air systems in the close air battlefield and the current shortfalls in U.S. Army aviation counter air doctrine.

The Joint Air Attack Team (JAAT), a joint CAS mission specifically designed to counter the Soviet tank force, is used as a basis for developing a joint counter CAS team. Command, control, and communications needed to effectively integrate USAF aircraft and counter air support systems into the Forward Area Defense (FFA) are offered and a model for a Joint Air Combat Attack Team (JACAT) defined. The study concludes with suggested JACAT tactics and examination of specific weapon systems for the counter CAS mission.

828. The Jedburghs - Combat Operations Conducted in the Finistere Region of Brittany, France From July - September 1944: An Historical Narrative of Jedburgh Teams Giles, Gilbert, Ronald, Horace, Hilary, and Francis, by Major Elliot J. Rosner, USA, 122 pages.

The Jedburghs consisted of three man allied teams trained to conduct guerilla warfare in conjunction with the French Resistance in support of the allied invasion of France. These teams consisting of French, British, and American men comprised of two officers, one always being French, and an enlisted wireless telegraph radio operator, were uniformed soldiers who volunteered in 1943 for this hazardous work behind enemy lines. Jedburgh or "Jed" teams were but one weapon available to the Supreme Headquarters Allied Expeditionary Force (SHAEP) and its commander, General Dwight D. Eisenhower for this covert mission.

This study examines the origins, purpose, and training of the special operations personnel in England. Additionally, the actual operations conducted by these six teams in the western most corner of the Brittany peninsula are discussed. As a forerunner to Special Forces, this paper also examines the validity of the Jedburgh concept and its actual application and utility in the summer of 1944, as well as, the lessons to be learned from those campaigns which are still applicable to warfare today.

829. A Study of the Medical Support to the Union and Confederate Armies During the Battle of Chickamauaga: Lessons and Implications for Today's U.S. Army Medical Department Leaders, by Major David A. Rubenstein, USA, 143 pages.

The Union's Campaign for Chattanooga, Tennessee, and its resulting Battle of Chickamauga, is a valuable study of marked contrasts. On the one hand, brilliant strategic planning and operational maneuver, in concert with skillful deception, allowed the Union's Army of the Cumberland to advance virtually unchallenged into the vital Southern city of Chattanooga on 9 September 1863. Following this drive into the gateway of Georgia and the Confederacy, however, was the Union defeat on the tactical battlefield just twelve miles to the southwest. Supporting each army was a medical support system grounded on the experiences and lessons of previous campaigns and battles. Both armies had medical leaders familiar with the medical organization, its recent accomplishments, and its capabilities. How these leaders applied the medical support doctrine of the era, within the scope of their duties, affected the lives of thousands of soldiers wounded on the Chickamauga battlefield.

The objective of this study is to examine the medical structures of both combatants, describe medical actions during the Chickamauga Campaign, from August to October 1863, and evaluate the effectiveness of each. As a result of this analysis appropriate implications are offered to the leadership of the Health Service Support system in the United States Army of 1990. Among the various implications discussed are the need for Health Service Support planning, tactical competence, staff cooperation, unity of command, and understanding of unique casualty care issues. The intended beneficiary of this historical analysis, and its suggested requirement of complete command support and dedicated medical training, is the very essence of an army: the soldier.

830. Exploiting Experience: Developing a Method for Validating Tactical and Training Doctrine Using Data from the National Training Center, by Major Michael J. Shadell, USA, 121 pages.

Over the past several years, the adequacy of the information produced by the National Training Center (NTC) to support training, doctrine, organization, and equipment improvements has been questioned. The major criticism is directed at the written portion of the NTC take home package, and focuses on the contention that the sense the bulk of the information produced is directed toward providing feedback to the units undergoing training, the written take home package is structurally unsuitable to serve as a source of data for conducting research on board tactical and training issues.

The purpose of this project is to determine whether a deficiency actually exists. The question to be addressed is: can researchers, using appropriate methods, employ the narrative training data from the National Training Center to assist in analysis of a complex tactical issue? The hypothesis is that the written take home package contains information of sufficient quality to assist in such analysis.

The hypothesis is tested by developing a method for employing the information to investigate a complex tactical issue. Synchronization is the issue chosen for research. The method evaluates the performance of task forces in five battlefield operating systems (intelligence, maneuver, fire support, mobility-counter mobility-survivability, and command and control) against the ability of task forces to achieve synchronized operations on the battlefield. The written portion of the NTC take home package provides all information used in this evaluation.

Major findings produced by this study are (by operating system): Intelligence - Reconnaissance and surveillance planning is an identified weakness which inhibits the ability of the task force to collect combat intelligence; maneuver - lack of adequate graphic control measures inhibits execution of the maneuver plan; fire support - developing and managing adequate target plans at task force level is an identified weakness; mobility,

countermobility, survivability - lack of detailed planning and preparation are the basic causes of ineffective performance; command and control - lack of effective procedures to monitor task force preparation for combat inhibits performance during execution.

Evaluation of these results indicate that they can reasonably be expected to be useful in an investigation of the process of synchronization. Therefore, the hypothesis that the information is of sufficient quality to support research is proven.

831. Deception Integration in the U.S. Army: An Analysis of the Current Status of Deception Integration in United States Army Doctrine and Training with an Overview of Pertinent Literature and Three Historical Examples, by Major Jack H. Spencer, USA, 195 pages.

The Army has begun the process of relearning and integrating deception into doctrine and operations. There is a lack of clarity concerning exactly what deception is and how it should be used. The state of doctrine and training both appear to be in need of aggressive review and modification.

History is clear on the lessons of deception. It is a potent combat multiplier that can be decisive in gaining surprise and initiative. Historical examples show that the costs of these operations are generally less than one would expect. The risk appears relatively low as well. Benefits, on the other hand, are uniformly significant, especially when compared to cost and risk.

The 1989 U.S. Army White Paper on Deception attempted to set the azimuth for deception integration. It failed to provide the urgency and priority required to initiate action of this magnitude. This thesis uses the premise of "What the White Paper should have said" to explore the subject.

The paper makes recommendations based on interviews with senior defense officials, including Generals Starry, Cavazos, and Livsey; Dr. Edward Luttwak, and several experts in the field of deception. The recommendations address doctrine development, parallel training, and the integration of deception into planning. Training events such as BCTP, the NTC, JRTC, and ARTEPs must all integrate deception as a central point of concern if deception is to become a uniform and effective component of Army doctrine and operations.

832. Special Operations Sniper Employment in Direct-Action Missions: An Analysis of the Capabilities and Limitations of Special Operation Force (SOF) Snipers to Interdict High-Value and Materiel Targets, by Major John L. Stanley, USA, 177 pages.

This study is an analysis of the SOF sniper's ability to interdict high-value targets including personnel and materiel. The SOF sniper is distinguished from the conventional sniper by his high degree of training and specialized skills. In addition, the SOF sniper has at his disposal a variety of weapons systems with which to interdict selected targets. These capabilities are unique among military snipers as they are normally employed because the SOF sniper is not limited to a conventional framework and can be employed in a greater variety of missions. The SOF sniper's capabilities include special weapons to interdict a wide range of targets, advanced training in sniper operations (for example, marksmanship, stalking, and concealment), and sophisticated special operations skills (such as, language skills, infiltration techniques, and fieldcraft). In short, the SOF sniper has the potential of being a significant threat in future conflicts.

This study analyzes available literature, current capabilities, and doctrinal requirements for special operations snipers. These criteria are matched against the contemporary nature of modern conflict and the strategic

environment to determine the feasibility of the SOF sniper's ability to perform direct-action interdiction missions.

This study concludes that the use of special operations snipers is provident in future conflict. The study also concludes that the range and scope of SOF snipers is far greater than that of the traditional military sniper. This increased capability translates into improved capability for personnel interdiction, limited materiel interdiction, and greater flexibility for employment throughout the spectrum of conflict. This study further concludes that any expanded employment of SOF snipers will largely be determined by better operational application in conflicts and improvements in sniper training.

833. Effects of Organizational Structure on American Enemy Prisoner of War Operations, by Major Gwynn A. Tucker, USA, 289 pages.

This study is an historical analysis of American enemy prisoner of war operations. In historical context, the study reviews types of organizational structures established, quality and effectiveness of guard and management personnel, flexibility of the organizations, the impact of international law, political (domestic and international) interference, and the results achieved in objective and subjective terms. The criteria used in the historical organization analysis is also applied to current Enemy Prisoner of War doctrine and organizations.

The study comments on the success or failure of prisoner of war operations during the major U.S. conflicts -- Revolutionary War, War of 1812, Mexican War, Civil War (Union and Confederacy), Spanish-American War, World War I, World War II, Korean War, and the Vietnam War. In addition, the study concludes that the United States has attempted to mitigate the effects of captivity on the individual prisoners of war with varying degrees of success. The primary factors affecting success were the type of organizational structure created to manage prisoner of war operations, the quality of personnel selected to perform guard duties, and the flexibility of the organization in meeting and overcoming adversity. Measures used to determine successful operations include death and escape rates of prisoners of war, impact of escaped or violet prisoners on combat zone operations, guard to prisoner ratios required to maintain order, and the ability of the United States to eliminate the threat of political exploitation of prisoners of war.

The study concludes with doctrinal, force structure, and further study recommendations to improve the ability of the United States to humanely maintain enemy prisoners of war in a variety of potential areas of conflict.

834. Soviet and U.S. Army Operational and Tactical Logistics, by Major Constantine S. Vakas, USA, 94 pages.

This study examines the logistical systems of the Soviet and U.S. Armies that support operational and tactical levels of war. It delineates very clearly the current status of these systems. The doctrine, organization, techniques, and procedures of the two systems are described and, where appropriate, compared and contrasted.

Understanding both the similarities and differences is an important benchmark for the quality of war plans made today and continued constructive evolution of the U.S. Army under the AirLand Battle tenets. Soviet logistics doctrine, organization, techniques, and procedures provide valuable insights and offer many readily applicable lessons to U.S. planners. These insights and lessons are particularly important because of analogous Soviet and U.S. warfighting doctrine, and fundamentally comparable support doctrine.

Specific findings with implications for U.S. logistics planners include: (1) the proposal to move large portions of division level support assets into the corps needs to be examined based on current Soviet trends, (2) the Soviet use of norms and planning factors may offer a means to simplify material management center functions, and (3) the continued consolidation of supply, maintenance, and transportation functions into multifunctional support units is fully justifiable.

835. The Army Organizational Effectiveness Program: A Historical Perspective, by Major Michael R. West, USA, 72 pages.

This study is an historical analysis of the Army Organizational Effectiveness Program and examines the foundations and conditions that institutionalized the program within the Army. This thesis focuses on those who proposed, initiated and guided it's evolution and how major advancements in management and applied behavioral sciences provided the necessary conditions for the program to develop. In addition, this thesis examines the Army's need to improve it's leadership and management practices through the use of OD, implementation of the OE program, and the circumstances which brought an end to OE within the Army.

836. Soviet Correlation of Forces and Means: Quantifying Modern Operations, by Major James K. Womack, USA, 126 pages.

This study analyzes the nature and extent of use of the Correlation of Forces and Means (COFM) in Soviet operational and tactical decisionmaking. It discusses the historical and military-scientific forces that compel the Soviets to use mathematical methods for solving complex battlefield problems. It details the methodology through which the Soviets arrive at combat potentials for armament and how these potentials are aggregated for force correlations. It reviews the relationship between force correlations and Soviet mathematical models and describes how both are used to support the commander's operational decision.

The study concludes with an analysis of the strengths and weaknesses of the COFM methodology. The author finds that COFM is an effective force optimizer that also relieves the commander of many burdensome assessments during his decision process. However, COFM was also found to suffer distinct limitations and weaknesses. Chief among these was its inability to quantify many of the more important battlefield variables that significantly influences the course and outcome of modern combat and operations.

Among the author's recommended areas for further research is the evaluation of a COFM-like methodology for U.S. Army use in the field.

837. The Role of the Corps Air Defense Artillery Brigade, by Captain Robert H. Woods, Jr., USA, 141 pages.

This study investigates the role of the corps ADA brigade in support of corps and division contingency operations, in view of the numerous corps missions and the need to reinforce the divisional air defense element. The concept presented is one that allows the corps air defense artillery brigade to provide air defense coverage for corps level critical assets while also simultaneously providing air defense networks throughout the corps area of operation.

The corps is the first level where the U.S. Air Force integrates its air defense capabilities along with those of the U.S. Army. This study emphasizes the importance of this relationship between the U.S. Air Force and the corps air defense artillery brigade.

The study explains the rationale behind the use of air defense networks throughout the corps area of operations. This study promotes the forward deployment of our weapon systems to extend the air defense artillery brigade's offensive capabilities. This forward deployment is necessary for the brigade to engage aircraft deep within the corps' area of interest as opposed to the corps' area of operations.

838. USA - USAF Spectrum Management for the Airland Battle: An Analysis of the Adequacy of the Current Spectrum Management Doctrine Within the USA and USAF in a Joint Environment, by Major Joseph S. Yavorsky, USA, 90 pages.

This study is an analysis of the current spectrum management doctrine within the US Army and US Air Force. The doctrine is outlined in detail for each service, concentrating on the airspace control communications requirements and electronic warfare requirements at corps and below. The demands on the use of the limited spectrum are so great that managers of the spectrum must be able to precisely determine requirements and fulfill those requirements in near real time. The competing demands of communications and electronic warfare upon the same resources presents a formidable challenge to the spectrum manager.

The conclusion which can be drawn from this study is that doctrine written by the different proponents within each service do not agree with each other nor with joint doctrine, in FM 100-5 Operations. Increased coordination between the combat and materiel developers of each service is recommended along with the recommendation that a single responsible agency for joint spectrum management be mandated by DOD.

839. Preparing for the Synchronization Process: Mechanized Battalion Task Force Level, by Major James E. Zanol, USA, 85 pages.

This study found that FM 71-2, The Tank and Mechanized Infantry Task Force, lack guidance on how to synchronize task force plans. As a result, battalion commanders and staffs cannot effectively train synchronization skills. This study recommends training in three areas to correct this problem.

An expert panel of former battalion commanders reviewed these three areas. Answering two surveys, this panel said in their experience synchronized action depends on these skills. Therefore, the panel recommended actions to improve these skills.

The thesis recommends training to improve commander and staff skills. Specifically, the areas for training are: combined arms skills, an integrated IPB, and timely, understood commander's concept. Also, the study recommends the Army publish a training circular on synchronization.

LIST OF AUTHORS

A

Antal, John F. - 9
Aswell, Paul L. - 9

B

Ball, John E. - 9
Barnhill, Anthony L. - 10
Brady, Michael J. - 10

C

Canady, John L. - 11
Casey, Michael S. - 11
Crary, John G. - 11

D

Davis, Lauren Steve, Jr., - 12
Derrick, Robert R. - 12

E

Edwards, Lawyn C. - 12
Eskridge, Jeffrey R. - 13
Ewing, James W. - 13

F

Fensterer, John F. - 13
Formica, Richard P. - 14
Frost, Denzil F. - 14

G

Garcia, Rolando C. - 14
Gessner, William G. - 15
Gutjahr, Robert - 15

H

Hampton, Greg R. - 16
Harshman, William R. - 16
Haselton, Mark A. - 17
Heinen, William J. - 17
Hutchings, Eric D. - 17

I

Ivy, Jack Morris Jr. - 18

J

Johnson, Carl E. - 18
Johnson, John D. - 18
Jordon, Daniel W. III - 18
Jussel, Paul C. - 19

K

Kaune, Charles S. - 19
Kazmierski, Michael J. - 20
Kenkel, Kevin G. - 20
Kerr, Richard E. - 20
Khan, Khalid Nawaz - 21
Kirby, Daniel R. - 21
Klenke, William J. - 22
Knowles, Donald T. - 22
Knudson, Patrick F. - 23

L

Lazendorf, Neil C. - 23
Leadbetter, Na - 23
Leay, Peter F. - 24
Lim Tech Huat, Michael - 24

M

Masood, Ahmed Khan - 31
McCarl, James M. Jr. - 31
McGhee, Donald J. - 26
McMiller, Anita W. - 26
Megahan, Rick - 27
Moore, Gary L. - 27

N

New, Terry L. - 28
Newton, Richard D. - 28
Nizolak, Joseph P. - 29

O

Olsen, Howard A. - 29

P

Palmer, Peter J. - 29
Pelletier, Gerard A. - 30
Puckett, Timothy R. - 30

R

Rhay, Gary D. - 31
Roberts, John A. - 31
Rolfs, Lawrence L. - 32
Rosner, Elliot J. - 32
Rubenstein, David A. - 32

S

Shadell, Michael J. - 33
Spencer, Jack H. - 34
Stanley, John L. - 34

T

Tucker, Gwynn A. - 35

V

Vakas, Constantine S. - 35

W

West, Michael R. - 36

Womack, James K. - 36

Woods, Robert H. - 36

Z

Zanol, James E. - 37